YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Bhagwat Kajal Vikram** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and characterization of bacteria from garlic." presents her bonafide work in B.Sc- III of the academic year 2018-2019.

SSNalawade

Mrs. S.S.Nalawade
PROJECT SUPERVISOR

EXAMINAR

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Chalke Sanjay Nathuram** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antimicrobial activity and Phytochemical analysis of tridax procumbeans ." presents her bonafide work in B.Sc- III of the academic year 2018-2019.

AKRandive

Mrs. A.K.Randive
PROJECT SUPERVISOR

EXAMINAR

SAShilkalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mrs. Chappe Sudhir Ramakant** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation of nicotine degrading bacteria **"** presents her bonafide work in B.Sc- III of the academic year 2018-2019.

SSNalawade

Mrs. S.S.Nalawade
PROJECT SUPERVISOR

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Gavade Prajakta Ankush** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "To isolate plastic degrading bacteria from soil" presents her bonafide work in B.Sc- III of the academic year 2018-2019.

SSNalawade

Mrs. S.S.Nalawade
PROJECT SUPERVISOR

SNadaf
EXAMINAR

SASHikalgar
CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mrs. Jadhav Aniket Dnyaneshwar** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Production of biodiesel from waste vegetable oil " presents her bonafide work in B.Sc- III of the academic year 2018-2019.

AKRandive

Mrs. A. K.Randive
PROJECT SUPERVISOR

EXAMINAR

SABhikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Janugade Vishwajit Vijay** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "antimicrobial efficacy of tulasi leaf extract on periodontal pathogen" presents her bonafide work in B.Sc- III of the academic year 2018-2019

AKRandive

Mrs. A.K.Randive
PROJECT SUPERVISOR

SNadaf
EXAMINAR

SASHikalgar
CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Munale Gangadhar Maheshankar** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "phytoremediation of waste water by algae" presents her bonafide work in B.Sc- III of the academic year 2018-2019

Miss. S.A. Shikalgar
PROJECT SUPERVISOR

EXAMINAR

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Nagpure Anuja Rajendra** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Production of alcohol from coconut fiber" presents her bonafide work in B.Sc- III of the academic year 2018-2019

SAShikalgar.

Miss. S.A. Shikalgar
PROJECT SUPERVISOR

EXAMINAR

SAShikalgar.

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Vagare Vaibhav Bhagavan** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Phytochemical analysis of medicinal herbs" presents her bonafide work in B.Sc- III of the academic year 2018-2019

AKRandive

Mrs. A.K.Randive
PROJECT SUPERVISOR

SNKadam

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Shedage Rutuja Dadasaheb** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Studies on polyphosphate accumulating bacteria isolated feom chicken shit" presents her bonafide work in B.Sc- III of the academic year 2018-2019

Miss. S.A. Shikalgar
PROJECT SUPERVISOR

EXAMINAR

CO-ORDINATOR

Course Coordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3181

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Bhagwat Kajal Vikram** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

Mrs. S.S.Nalawade

Project Guide

Examiner

Course Coordinator

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Course Co-ordinator
Department of Biotechnology

Roll No: 3182

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Chalake Sanjay Nathuram**of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

A.K.Randive

Mrs. A.K.Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3183

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr. Chappe Sudhir Ramakant**. of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

SSNalawade

Mrs. S.S.Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

Roll No: 3184

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Gavade Prajakata Ankush** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

Mrs.S.S.Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

Roll No: 3185

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Jadhav Aniket Dnyaneshwar** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

AKRandive.

Miss. A.K.Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY

Roll No: 3186

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr. Janugade Vishwajit Vijay** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

Mrs. A.K.Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3187

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr. Munale Gangadhar Maheshankar** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

Miss. S. A. Shikalgar
Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology



Roll No: 3188

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Nagpure Anuja Rajendra** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

Miss. S. A. Shikalgar		
Project Guide	Examiner	Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3189

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr. Vagare Vaibhav Bhagavan** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

Mrs. A.K.Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * BIOTECHNOLOGY * Karad

Roll No: 3190

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Bhagawat Kajal Vikram** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

SSNalawade

Mrs. S.S. Nalawade

Project Guide

Nadaf

Examiner

Ashikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3191

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Shedage Rutuja Dadasaheb**of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

Miss. S. A. Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

Roll No: 3192

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Waghmare Madhuri Rajendra** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

SNalawade

Miss. S. S. Nalawade

Project Guide

SNadaf

Examiner

Ashikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Roll No: 3193

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr. Adsule Varadraj Rajendra** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2018-2019

SAShikalgar

Miss. S. A. Shikalgar

Project Guide

SNadaf

Examiner

SAshikalgar

Course Coordinator

Course Coordinator
Department of Biotechnology

Yashwantrao Chavan College of Sc
BIOTECHNOLOGY
Karad

ROLL NO : - 5001

DATE:- 09/05/2019

EXAM NO:- 3522

Shri Shivaji Education Society, Karad Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss. Bagade Devika Govardhan has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "ISOLATION AND CHARACTERZATION OF ZINC RESISTANCE BACTERIA FROM COIL COATING INDUSTRIAL WASTE WATER"
represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Prof. T.B. Sawant

Project Supervisor

Examiner

Dr. N.R. Shaikh

HEAD
DEPARTMENT OF MICROBIOLOGY

Head of the Department

Yashwantrao Chavan College of Science * KARAD *

Roll No. - 5004

Date – 6/05/2019

Exam No. - 03526

Shri Shivaji Education Society, Karad

Board For Higher Education's

Yashwantrao chavan college of science, karad

Department of microbiology

LABORATORY CERTIFICATE

This is to certify that Miss. Dharmadhikari Aishwarya Sushilkumar has carried out the required project work prescribed by the shivaji university Kolhapur in practical course VIII; Project work for M.Sc. Part II (Semester IV) and her project was entitled as "PRODUCTION AND CHARACTERISATION OF EXOPOLYSACCHARIDE OF AGROBACTERIUM SPP. BY USING KITCHEN WASTE." represents her bonafide work in the M.Sc. II (Semester IV) of the academic year 2018-2019.

Dr. J. U. Patil

Project supervisor

Evaluated

9/5/2019

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY

Head of the department

Yashwantrao Chavan College of Science KARAD

ROLL NO: - 5006

EXAM NO:-03533

DATE: - 06/05/2019

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Mr. **GHUGE PANDURANG KRUSHNA.**

has carried out the required project work prescribed by Shivaji University, Kolhapur in practical course-VIII Project work for M.Sc. part-II (Semester-IV) Microbiology course and his project work entitled as **'ISOLATION AND CHARACTERISATION OF LIPASE PRODUCING ORGANISMS ISOLATED FROM GARAGE OIL CONTAMINATED SOIL'** represents his bonafide work in the M.Sc.-II (Semester IV) of the academic year 2018-2019.

Dr. J. U. Patil
Project Supervisor

Examiner

Dr. N. R. Shaikh
Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO - 5009

EXAM NO - 3540

Date - 6/5/019

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss. KawareAnita Krushanat has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical course VIII: project work for M.Sc. part II (Semester IV) Microbiology course and her project work entitled as "ISOLATION AND CHARACTERIZATION OF NITROGEN FIXING BACTERIA FROM RHIZOSPHERIC SOIL" represents her bonafide work in the M.Sc. II (Semester –IV) of the academic year 2018 - 2019

Yashwantrao Chavan College of Science KARAD

Dr. N. R. Shaikh,

Project supervisor

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY

Head of the Department

ROLL No : 5011
EXAM No :03542

DATE: 06/05/2019

Shri Shivaji Education Society, Karad
Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Kumbhar Sandip Mahadev** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.sc Part II (Semester IV) Microbiology course and his Project Work entitled as **"SCREENING AND CHARACTERIZATON OF PESTICIDE RESISTANT PLANT GROWTH PROMOTING BACTERIA FROM PESTICIDE CONTAMINATED SOIL"** represent his bonafide work in the M.sc II (Semester IV) of the academic year 2018 – 2019.

Dr. J. U. Patil
Project Supervisor

EXAMINER

Dr. N.R. Shaikh
Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

EXAM NO :- 03543

DATE:- 4|5|19

ROLL NO :- 5012

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss Kumbhar Sarika Sadashiv has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "ISOLATION AND CHARACTERIZATION OF CADMIUM TOLERANT BACTERIA : THEIR TOLERANCE AND REMOVAL POTENTIAL"represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Prof. T.B. Sawant

Project Supervisor

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY

Head of the Department

ROLL NO: - 5013

DATE: - 6-5-2019

EXAM NO:-03544

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **MISS. KUMBHAR SMITARANI ASHOK** has carried out the required project work prescribed by Shivaji University, Kolhapur in practical course-VIII Project work for M.Sc. part-II (Semester-IV) Microbiology course and her project work entitled as **"ANTIBACTERIAL AND ANTIFUNGAL ACTIVITY OF WHITE ONION EXTRACT AND ITS PHYTOCHEMICALS ON COMMON PATHOGENS"** represents her work in the M.Sc.-II (Semester IV) of the academic year 2018-2019.

Dr. N. R. Shaikh
Project Supervisor

Examiner

Dr. N. R. Shaikh
Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY,

Yashwantrao Chavan College of Science KARAD

ROLL NO:- 5014

EXAM NO:- 3549

DATE:- 6/5/2019

Shri Shivaji Education Society, Karad

Board for Higher Education

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss MALI SHITAL PRAKASH** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as **"ISOLATION AND CHARACTERIZATION OF CELLULOLYTIC AND LIPOLYTIC BACTERIA ISOLATED FROM COW DUNG"** represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Dr. J.U. PATIL
Project Supervisor

Yashwantrao Chavan College of Science * KARAD *

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY
Head of the Department

ROLL NO :- 5015

EXAM NO :- 3550

DATE:- 07/05/19

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Mali Shweta Sunil** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as **"ISOLATION AND CHARACTERISATION OF BIOFLOCCULANT PRODUCING BACTERIA FROM INDUSTRIAL WASTE WATER AND IT'S APPLICATION"** represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Prof. T.B.Sawant

Project Supervisor

EXAMINER

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO :- 5016

DATE 07/05/2019

EXAM NO :- 3551

Shri Shivaji Education Society, Karad

Board for Higher Educations

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. MANE DIKSHA DEEPAK** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "ISOLATION AND CHARACTERIZATION OF ZINC SOLUBILIZING BACTERIA FROM QUARRY DUST POWDER AND ROLE IN BIOREMEDIATION." represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

PROF. T.B.SAWANT
Project Supervisor

Yashwantrao Chavan College of Science ★YASHWANTNAGAR★KARAD★

EXAMINER

Head of the Department
DEPARTMENT OF MICROBIOLOGY

ROLL NO :- 5019

EXAM NO : - 03557

DATE :- 06/05/2019

Shri Shivaji Eduction Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss Patil Amruta dhanpal** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part (semester IV) Microbiology course and her Project Work entitled as **ISOLATION AND CHARACTERIZATION OF HALOTOLERANT BACTERIA FROM SALTPAN SOIL OF GOA** represents her bonafide work in the M.Sc.II (Semester IV) of the academic year 2018 2019.

Dr. N. R. Shaikh

Project Supervisor

Evaluated

7/5/2019.

EXAMINER

Dr. N. R. Shaikh

HEAD

DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science, Karad

ROLL NO. : 5020

EXAM NO :-03562

DATE: 26.04.2019

Shri Shivaji Education Society, Karad

Board for Higher Educations

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss Patil Vaibhavi Uttam** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "RAPID DEGRADATION OF BIODEGRADABLE WASTE AND FORMATION OF COMPOST USING MICROBIAL CONSORTIUM" represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Dr. N. R. Shaikh.

Project Supervisor

EXAMINER

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO :- 5021

EXAM NO :- 03564

DATE :- 06/05/2019

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Mr. SANGAR CHARUDATTA SHASHIKANT **has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as** "ISOLATION, CHARACTERIZATION OF β-GALACTOSIDASE PRODUCING BACTERIA FROM DAIRY EFFLUENT AND DIFFERENT EXTRACTION PROCESSES OF ENZYME" **represents his bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 -2019.**

Dr. J. U. Patil.

Project Supervisor

EXAMINER

Dr. N. R. Shaikh

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Roll no - 5023 Date - 7/05/2019

Exam seat no 3666

Shri Shivaji Education Society, Karad

Board for Higher Education

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss Shedbalkar Vrunda Deepak** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as **"Isolation and characterization of melanoidin degrading bacteria by using microbial consortium"** represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019

Prof. T. B. Sawant.
Project Supervisor

EXAMINER

Head of the Department
HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science

ROLL NO :- 5025

EXAM NO :-03524

DATE:- 7 5 2019

Shri Shivaji Education Society, Karad

Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss. BALTE ROHINI ISHWARhas carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "PRODUCTION OF INVERTASE FROM YEAST BY USING JAGGERY WASTE" represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Prof.T.B.Sawant

Project Supervisor

EXAMINER

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO: 5026 DATE: 08/05/2019

EXAM NO: 03527

Shree Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that MISS. GAIKWAD MADHURI MADHUKAR has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project Work for M.Sc. Part II (Semester IV) Microbiology Course and her Project Work entitled as "EXTRACTION OF POTATO LEAVES AND EVALUATION OF ITS ANTIMICROBIAL ACTIVITY" represents her bonafide work in the M.Sc. II (Semester IV) of the academic year 2018-2019

Dr. J. U. Patil
Project Supervisor

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY
Head of the Department

Yashwantrao Chavan College of Science KARAD

ROLL NO :- 5027

EXAM NO :- 03528

Date:- 7/5/2019

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss Gaikwad Priyanka Ramesh has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her PROJET REPORT entitled as "ISOLATION AND CHARCTERISATION OF ARSENIC RESISTANT BACTERIA FROM SOIL AND STUDIES ON BIOACCUMULATION" represents her work in the M.Sc. II (Semester-IV) of academic year 2018 –2019.

Dr. T. B. SAWANT.
Project Supervisor

EXAMINER

Dr .N.R. Shaikh.
Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO :- 5028

EXAM NO :- 3529

DATE:- 6/5/19

Shri Shivaji Education Society, Karad
Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Gharal Rakhi Suresh** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc.Part II (Semester IV) Microbiology course and her Project Work entitled as **"ISOLATION, CHARACTERIZATION AND PRODUCTION OF PEROXIDASE FROM BACTERIA AND ITS APPLICATION IN PHENOL DEGRADATION"** represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Dr. J.U. Patil ,
Project Supervisor

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY
Head of the Department

Yashwantrao Chavan College of Science KARAD

ROLL NO :- 5030 DATE:- 06/05/2019

EXAM NO :- 03532

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss. Ghorpade Gouri Jaywant has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "ISOLATION AND IDENTIFICATION OF BACTERIA SYNTHESIZING SILVER NANOPARTICLES: CHARACTERIZATION OF PARTICLES AND STUDY OF ANTIMICROBIAL ACTIVITY" represents her work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Prof. Dr. N. R. Shaikh sir

Project Supervisor **EXAMINER** **Head of the Department**

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO :- 5032

EXAM NO :- 3535

DATE:- 06/05/2019

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss Jadhav Priyanka Ramesh has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "STUDIES OF ACTINOMYCETES ISOLATED FROM AIR OF MUNICIPAL SOLID WASTE DISPOSAL AREA AND THEIR ANTAGONISTIC ACTIVITY" **represents her work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.**

Dr. N. R. Shaikh.

Project Supervisor **EXAMINER** **Head of the Department**

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO:- 5033

EXAM NO:-03538

DATE:- 6/5/2019

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is certify that Miss. KAMBLE AMRUTA BALASO has carried out the require project work prescribed by the Shivaji university, Kolhapur in Practical Course VII: Project work for M.Sc. Part II (Semister IV) Microbiology course and her Project Work entitled as **"PRODUCTION OF AMYLASE FROM THERMOPHILIC BACTERIA USING COMPOST AS SOURCE"** represents her bonafide work in the M. Sc. II (Semester-IV) of the academic year 2018-2019.

Dr. N. R. Shaikh.

Project Supervisour

EXAMINAR

Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO : 5035

EXAM NO : 03545

DATE: 6/05/2019

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Langade Kalyani Haridas** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as **"ISOLATION AND CHARACTERIZATION OF PECTINASE PRODUCING BACTERIA AND THEIR APPLICATIONS"** represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 - 2019.

Dr. J.U. Patil
Project Supervisor

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO :- 5036

EXAM NO :- 3546

DATE:- 08-05-2019

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. LATKAR SAMIKSHA VILAS** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as **"ISOLATION AND CHARACTERIZATION OF PROGESTERONE BIOTRANSFORMING BACTERIA AND FUNGI"** represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Prof. T.B.Sawant
Project Supervisor

Evaluated
9/5/2019
EXAMINER

Head of the Department
HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

ROLL NO:- 5037 DATE:- 5th May 2019

EXAM NO:-03547

Shri Shivaji Education Society,

Karad Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss Madabhave Sayali Sagar has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as"STUDIES ON BIOETHANOL PRODUCTION BY USING MUTANT STRAIN OF *Saccharomyces cerevisiae*" represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Prof. T.B. Sawant
Project Supervisor

EXAMINER

Dr. N.R.Shaikh
Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO :- 5038
EXAM NO :- 03548

DATE:- 7/5/2019

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss. Mali Dhanashri Prakash has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "ISOLATION AND CHARACTERIZATION OF SODIUM DODECYL SULPHATE DEGRADING ORGANISMS FROM SOIL" represents her work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Dr. N. R. Shaikh.

Project Supervisor

EXAMINER

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO :- 5024

EXAM NO :- 3569

DATE:- 4 | 5 | 2019

Shri Shivaji Education Society, Karad
Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Mr. Prashant Babasaheb Thorat has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "ISOLATION, CHARACTERISATION AND PRODUCTION OF PHB BY USING *Bacillus spp.* ISOLATED FROM SOIL." represents his work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Dr.N.R. Shaikh
Project Supervisor

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY
Head of the Department

Yashwantrao Chavan College of Science KARAD

ROLL NO :- 5029

DATE:- 04/05/2019

EXAM NO :- 3531

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that MR.GHAWAT AKASH VASANT has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his Project Work entitled as "ISOLATION, CHARACTERIZATION AND EXTRACTION OF PIGMENT PRODUCING BACTERIA FROM DIFFERENT WASTES AND STUDY ON ITS TEXTILE APPLICATION" represents his bonafide work in the M.Sc. II (Semester-IV) of the academic

year **2018 –2019.**

Prof. T.B. Sawant

(Project Supervisor)

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY
Head of the Department

Yashwantrao Chavan College of Science KARAD

ROLL NO : - 5039 DATE:- 6|5|2019

EXAM NO:- 03552

Shri Shivaji Education Society, Karad Board for Higher Educations

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss Mayane Neha Ganesh has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "To STUDY ISOLATION AND CHARACTERISATION OF GUAIACOL DEGRADING ORGANISMS FROM THE WASTEWATER AND SOIL FROM FARM" represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Prof. Dr. N. R. Shaikh

Project Supervisor

EXAMINER

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO :- 5040

DATE:- 08-05-2019

EXAM NO :- 3553

Shri Shivaji Education Society, Karad
Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss More Prajakta Yuvraj** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "STUDY OFAMYLASE PRODUCTION FROM BANANA AND POTATO PEEL USING *BACILLUS SUBTILIS* AND IT'S OPTIMIZATION" represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Dr. J. U. Patil
Project Supervisor

EXAMINER

Dr. N. R. Shaikh
Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO :- 5043 DATE :-

EXAM NO : - 03559

Shri Shivaji Eduction Society, Karad

Board for Higher Education's

YashwantraoChavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss Patil Namrata Gundhar** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part (semester IV) Microbiology course and her Project Work entitled as **ISOLATION AND CHARACTERIZATION OF HALOALKALIPHILIC BACTERIA FROM SALTPAN SOIL OF GOA** represents her bonafide work in the M.Sc.II (Semester IV) of the academic year 2018 - 2019

Dr. N. R. Shaikh

Project Supervisor EXAMINER Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO -5044

DATE - 6/5/2019

EXAM NO - 03560

Shri. Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of microbiology

LABORATORY CERTIFICATE

This is to certify that Miss.Patil Pooja Pratap has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course 5: Project work for M.Sc. 2 (semester- 4) Microbiology course and her project Work entitled as"Use of Azotobacter isolates for improving productivity of economical important crop grown in saline soil".represent her bonafide work in the M.Sc.2 (semester-4) of the academic year 2018-2019.

Dr.J.U.Patil.

Project Supervisor

EXAMINER

Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO :- 5045

EXAM NO :- 03561

DATE:- 06/05/2019

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss Patil Rachana Ramgounda** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "ISOLATION, CHARACTERIZATION AND EXTRACTION OF PHB FROM HALOTOLERANT BACTERIA ISOLATED FROM SALTED SURMAI FISH " represents her work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Dr. N. R. Shaikh.
Project Supervisor

EXAMINER

Head of the Department
HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO : 5046

DATE: 05/05/2019

EXAM NO : 03563

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Powar Monica Dattatray** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc Part II (Semester IV) Microbiology course and her Project Work entitled as "ISOLATION AND CHARACTERIZATION OF E-WASTE LEACHING BACTERIA FROM SOIL" represent her bonafide work in the M.sc II (Semester IV) of the academic year 2018 – 2019.

Prof. T. B. Sawant

Project Supervisor

EXAMINER

Dr. N.R.Shaikh

HEAD

DEPARTMENT OF MICROBIOLOGY

Head of the Department

ROLL NO :- 5047

EXAM NO :- 3521

DATE:- 8-5-2019

Shri Shivaji Education Society, Karad
Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss SHINDE AMRUTA ANANDRAO** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "ISOLATION AND CHARACTERIZATION OF PESTICIDE RESISTANT BACTERIA " represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Dr. J. U. Patil
Project Supervisor

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY
Head of the Department

Yashwantrao Chavan College of Science KARAD

ROLL NO :- 5048

DATE :- 07/05/2019

EXAM NO. :- 3567

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. SURVE KIRAN SUBHASHSINH** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "ISOLATION AND CHARACTERIZATION OF CHITIN DEGRADING BACTERIA USING SHRIMP SHELL WASTE AND OPTIMIZATION OF CHITINASE ACTIVITY" represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

PROF. T.B. SAWANT
Project Supervisor

Examiner

Head of the Department
HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO: - 5049 **DATE: - 07/05/2019**

EXAM NO: - 3568

Shri. Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Mr. Tamboli Mosin Aslam has carried out the required project work prescribed by Shivaji University, Kolhapur in practical course VIII: Project work for M.Sc. part II (Semester IV) Microbiology course and his project work entitled as "ISOLATION AND CHARACTERIZATION OF SALT TOLERANT RHIZOBIA FROM *Sesbania bipsinosa*" represents his Bonafide work in the MSc II (Semester IV) of the academic year 2018-2019.

Prof. T.B.Sawant
Project Supervisor

Yashwantrao Chavan College of Science KARAD

16/5/19
Examiner

Dr. N. R.Shaikh
Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Shree Shivaji Education Society's Karad, Board for Higher Education's

YASHVANTRAO CHAVAN COLLEGE OF , SCIENCE
KARAD

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that **Miss Adsule Pragati Krishnat** has satisfactorily carried out project work on **"An Introduction To Number Theory"**

Prescribed by the Shivaji University Kolhapur for the B.Sc.-III

MATHEMATICS (2018-2019)

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

Teacher in Charge

Examiner
14/3/2019

For Head of Department

Shree Shivaji Education Society"s Karad, Board for Higher Educations

YASHVANTRAO CHAVAN COLLEGE OF, SCIENCE , KARAD

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that **Miss. Agarkar Manali Ravindra.** Has satisfactorily carried out required project work on **"An Introduction of Cantor Set"** . prescribed by the Shivaji University Kolhapur for The **B.Sc –III MATHEMATICS (2018-2019).**

Teacher in Charge Examiner for Head of Department

14/03/19

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

Shree Shivaji Education Society's Karad, Board for Higher Education's

YASHVANTRAO CHAVAN COLLEGE OF , SCIENCE
KARAD

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that **Mr. Bavdhane Vinesh Babu** has satisfactorily carried out project work on **"The Great Mathematician Srinivasa Ramanujan"** Prescribed by the Shivaji University Kolhapur for the B.Sc.-III MATHEMATICS (2018-2019)

Teacher in Charge | Examiner | For Head of Department

14/03/19

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

Date- 9-3-19.

Exam Seat No. _____ *Roll No.* 3044

Yashwantrao Chavan College of Science, Karad.

Department of Mathematics

CERTIFICAE

This is to certify that,

Miss. Gurav Malan Jagannath

have successfully completed the Project on

"Differential Geometry"

For the academic year 2018-2019. This Project is carried out under my guidance and supervision. With the best my knowledge this is his original work and submitted for the degree of B. Sc. in Mathematics of Shivaji University, Kolhapur.

Project Guide

Head
For Department of Mathematics

External Examiners
16/3/2019

Roll No. 3044

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

Roll No - 3045 Exam Seat No.-

Shree Shivaji Education Society's Karad Board For Higher Education's

YASHVANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that **Jadhav Swapnali Anil** has satisfactorily carried out required Project work on **Prime Number** Prescribed by the Shivaji University Kolhapur for the B.Sc.-III MATHEMATICS (2018-2019)

14/03/19

Teacher In-Charge **Examiner** **For Head Of Department**

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

Shree Shivaji Education Society's Karad, Board for Higher Education's

YASHVANTRAO CHAVAN COLLEGE OF , SCIENCE
KARAD

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that **Miss Jadhav Shilpa Shankar** has satisfactorily carried out project work on **"Application of mathematics in algebra"**

Prescribed by the Shivaji University Kolhapur for the B.Sc.-III

MATHEMATICS (2018-2019)

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

14/03/19

Teacher in Charge | Examiner | Head of Department

Exam Seat No:

Roll No: 3047

Shri Shivaji Education Society, Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

CERTIFICATE

This is to certify that, the project report "**INTRODUCTION TO INDUSTRIAL MATHEMATICS**" submitted by **Master Akshay Maruti Jaigade.** In partial fulfillment of the requirement for the academic year of B. Sc. III Mathematics to the Shivaji University Kolhapur. He has carried out it satisfactorily.

Yashwantrao Chavan College of Science * Karad * MATHEMATICS

Teacher In Charge

Examiner
14/8/2019

HOD Mathematics

Exam Seat No: Roll No:

Shri Shivaji Education Society, Karad Board For Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

CERTIFICATE

This is to certify that Miss Mahadic Suchita Baburao has satisfactorily carried out required project work

on

Congruence Relation

Prescribed by the Shivaji University Kolhapur for the B.Sc. III MATHEMATICS (2018-2019)

Yashwantrao Chavan College of Science * Karad * MATHEMATICS

Teacher In Charge Examiner 14/03/19 HOD Mathematics

Shree Shivaji Education Society's Karad, Board for Higher Education's

YASHVANTRAO CHAVAN COLLEGE OF , SCIENCE
KARAD

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that **Miss. Mali Snehal Ananda** has satisfactorily carried out project work on **"Operation Research"** Prescribed by the Shivaji University Kolhapur for the B.Sc.-III MATHEMATICS (2018-2019)

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

Teacher in Charge

Examiner
14/3/2019

for Head of Department

Shree Shivaji Education Society's Karad, Board for Higher Education's

YASHVANTRAO CHAVAN COLLEGE OF , SCIENCE
KARAD

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that **Mr – Mujawar Samir Shabbir** has satisfactorily carried out project work on **"A Prime Number"**

Prescribed by the Shivaji University Kolhapur for the B.Sc.-III

MATHEMATICS (2018-2019)

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

Teacher in Charge

Examiner

14/8/2019

For Head of Department

Exam seat no:- Roll No:-3051

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,
KARAD.

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that Miss PATEL JEENAT MUSTAFA Has satisfactorily carried out required project work on, **"An Introduction of Cantor Set"** Prescribed by the Shivaji University Kolhapur for the **B.Sc.-III MATHEMATICS (2018-2019).**

Yashwantrao Chavan College of Science ★ MATHEMATICS ★ Karad ★

Teacher in charge Examiner Head of department

Shree Shivaji Education Society"s Karad, Board for Higher Educations

YASHVANTRAO CHAVAN COLLEGE OF, SCIENCE , KARAD

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that **Miss. Patil Prajakta Ramchandra.** Has satisfactorily carried out required project work on **"History of Trignometry"** . prescribed by the Shivaji University Kolhapur for The **B.Sc –III MATHEMATICS (2018-2019).**

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

14/03/19

Teacher in Charge Examiner FOR Head of Department

EXAM SEAT NO :

ROLL NO: 3053

Shree Shivaji Education Socity's Karad, Board For Higher Education

YASHWANTRAO CHAVAN COLLAGE OF SCIENCE, KARAD

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that Miss.Priyanka vikas patil has satisfactorily carried out required project work on "Apllication Of Mathematics in Daily Life"Prescibed by the Shivaji University Kolhapur for the B.Sc.III MATHEMATICS (2018-2019).

Teacher In charge

Examinar

14/3/2019

Head of department

Yashwantrao Chavan College of Science Karad MATHEMATICS

Exam seat no:- Roll No:-3054

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,
KARAD.

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that Miss **PAWAR NIKITA APPASAHEB** has satisfactorily carried out required project work on **" Introduction to trigonometry "** Prescribed by the Shivaji University Kolhapur for the **B.Sc.-III MATHEMATICS (2018-2019).**

Yashwantrao Chavan College of Science MATHEMATICS Karad

Teacher in charge **Examiner** **Head of department**

Shree Shivaji Education Society's Karad, Board for Higher Education's

YASHVANTRAO CHAVAN COLLEGE OF , SCIENCE
KARAD

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that **Mr - Sayyad Niyaj Akbar** has satisfactorily carried out project work on " Active contour model/snake model"

Prescribed by the Shivaji University Kolhapur for the B.Sc.-III

MATHEMATICS (2018-2019)

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

14/03/19

Teacher in Charge Examiner For Head of Department

Shree Shivaji Education Society's, Karad, Board For Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

DEPARTMENT OF MATHEMETICS

CERTIFICATE

This is to certify that Miss. Rohini Jotiram Tupe has satisfactorily carried out required project work on "Carl Friendrich Gauss" Prescribed by the Shivaji University Kolhapur for the B.Sc.-III MATHEMETICS (2018-2019).

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

Teacher in Charge

Examiner

14/3/2019

For
Head of Department

Exam seat no:-

Roll No:-3057

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,
KARAD.

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that **YELAVE PRAVIN C.** has satisfactorily carried out required project work on, **"Numerical Integration"** Prescribed by the Shivaji University Kolhapur for the **B.Sc.-III MATHEMATICS (2018-2019).**

Teacher in charge **Examiner** **Head of department**

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

Shree Shivaji Education Society"s Karad, Board for Higher Educations

YASHVANTRAO CHAVAN COLLEGE OF, SCIENCE , KARAD

DEPARTMENT OF MATHEMATICS

CERTIFICATE

This is to certify that **Miss. Havaldar Amruta Suryakant.** Has satisfactorily carried out required project work on **"Recurrence Relation"** . prescribed by the Shivaji University Kolhapur for The **B.Sc –III MATHEMATICS (2018-2019).**

Teacher in Charge Examiner For Head of Department

Yashwantrao Chavan College of Science * Karad * MATHEMATICS

SHRI SHIVAJI EDUCATION SOCIETY, KARAD

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, **Mr. Guruprasad Dilip Kulkarni** have completed project work entitled ***"Online Kids Shoppy"*** for the partial fulfillment of the award of the degree "Bachelor of Science in Computer Science" (B.Sc. III (CS) Sem-VI) of **Shivaji University, Kolhapur** for the academic year 2018-2019.

To the best of my knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date :02 / 03/ 2019.

Place : Karad.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

Prof. N. R. Jagtap
(Project Guide)

02-03-2019

Examiner

9/3/19

Dr. B. P. Relekar
(Head Of Department)

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, ***Miss. Komal Ravindra Pujari*** have completed project work entitled ***"Online Watch Soppy"*** for the partial fulfillment of the award of the degree "Bachelor of Science in Computer Science" (B.Sc. III (CS) Sem-VI) of **Shivaji University, Kolhapur** for the academic year 2018-2019.

To the best of my knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date : 07 /03 **/2019.**
Place : Karad.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

Prof. N. V. Thorat		**Dr. B. P. Relekar**
(Project Guide)	**Examiner**	**(Head Of Department)**

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, ***Mrs. Palange Mayuri Mahendra*** have completed project work entitled ***"Mary Flower Shop"*** for the partial fulfillment of the award of the degree "Bachelor of Science in Computer Science" (B.Sc. III (CS) Sem-VI) of **Shivaji University, Kolhapur** for the academic year 2018-2019.

To the best of my knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date : 07/03/2019.
Place : Karad

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

Prof. N. V. Thorat
(Project Guide)

9/3/19
Examiner

Dr. B. P. Relekar
(Head Of Department)

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, *Miss. Salunkhe Sarai Sanjay, Miss. Kachare Madhuri Mahadev* have completed project work entitled ***"Fish Export Company"*** for the partial fulfillment of the award of the degree "Bachelor of Science in Computer Science(Entire)III" (B.Sc. III CS (Entire)III) of Shivaji University, Kolhapur for the academic year 2018-2019.

To the best of my knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date : 29 / 03 **/2019.**
Place : Karad.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

Prof. A.V. Nalawade
(M.Sc.(CS))
(Project Guide)

Dr. B. P. Relekar
(Head Of Department)

29/3/19

Examiner

SHRI SHIVAJI EDUCATION SOCIETY, KARAD

"Be one with the downtrodden and the underprivileged"

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, ***Mr.Shivraj Dilip Sawant*** have completed project work entitled ***"TV Cable Network System"*** for the partial fulfillment of the award of the degree "Bachelor of Science in Computer Science (Entire)" (B.Sc. III CS (Entire) Sem-VI) of Shivaji University, Kolhapur for the academic year 2018-2019.

To the best of our knowledge and belief this is my original work and not submitted earlier, anywhere for any purpose.

Date : 23 **/ 03 /2019.**

Place : Karad.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

Prof. N. R. Jagtap
(Project Guide)

23/4/19
Examiner

Dr. B. P. Relekar
(Head Of Department)

Yashwantrao Chavan College of Science, Karad

Department Of Electronics

CERTIFICATE

This is to certify that, the project work entitled "***Development of Linear Displacement Measurement System***" which is submitted by,

Miss. Jadhav Megha Sanjay (Roll No:- 3021)

Miss. Jangade Amruta Sanjay (Roll No: 3022)

Miss. Pol Bharti Hanmant (Roll No:- 3027)

in the partial fulfillment of the requirement for the award of the degree of ***"Bachelor of Science in Electronics"*** of ***Shivaji University, Kolhapur*** is the record of their own work carried out under my guidance year 2018-2019

Place – Karad

Date – 02/03/2019

Shri. A. A. Mulla

(Project Guide)

Head of Department

Head
Department of Electronics
Yashwantrao Chavan College Of Science, Karad

Examiner

Yashwantrao Chavan College of Science ★ Karad ★ ELECTRONICS

Shree shivaji Education Society Karad'

Yashwantrao Chavan College of Science Karad

Department of zoology

CERTIFICATE

This is to cirtify that **Miss. Jamdade Karuna Kisan** has completed the project on **EFFECT OF ADULTERATED MILK ON MITOSIS IN ONION ROOT TIPS** for fulfillment of practical work prescribed in Shivaji University Kolhapur Zoology under guidance. during the Year 2018-19.

11/3/19

Dr.V.I. Kalamade
(under Gaidance)

Department of Zoology
Yashwantrao Chavan College of Science, Karad

Head Dept. Of Zoology

External Examiner

Yashwantrao Chavan College of Science karad.

Yashwantrao Chavan College of Science ★ ZOOLOGY ★ Karad

Shree shivaji Education Society ,Karad

Yashwantrao Chavan College of Science,
Karad

Department of Zoology

CERTIFICATE

suraj shinde

This is to cirtify that Miss. **Prajkta Sandip Patil** his completed the project on "**Diversity Of Fresh Water Fishes from Karad Tahsil of Satara District, Maharashtra State India**" for fulfillment of practical work prescribed in Shivaji University Kolhapur Zoology under guidance. during the Year 2018-19.

Project Guide

Examinar

Head
Dept. Of Zoology

Yashwantrao Chavan Collage of Science karad.

Yashwantrao Chavan College of Science ★ Karad ★ ZOOLOGY

Shree Shivaji Education Society Karad'

Yashwantrao Chavan College of Science
Karad

Department of Zoology

CERTIFICATE

This is to cirtify that **Miss. Pratiksha Krishnat Pawar** has completed the project on **"STUDY OF ZOOPLANKTONS AND PHYTOPLANKTONS OF KRISHNA RIVER NEAR PRITISANGAM"** for fulfillment of practical work prescribed in Shivaji University Kolhapur Zoology under guidance during the Year 2018-19.

Project Guide

Examiner

Kadte 11/3/19
Head
Department of Zoology
Yashwantrao Chavan College of Science, Karad

Head
Dept. Of Zoology

Yashwantrao Chavan College of Science Karad.

Yashwantrao Chavan College of Science Karad ZOOLOGY

Shree shivaji Education Society ,Karad

Yashwantrao Chavan College of Science,
Karad

Department of Zoology

CERTIFICATE

This is to cirtify that **Miss. Megha sunil waghmare** his completed the project on "**Diversity Of Fresh Water Fishes from Karad Tahsil of Satara District, Maharashtra State India**" for fulfillment of practical work prescribed in Shivaji University Kolhapur Zoology under guidance. during the Year 2018-19.

Project Guide

Examinar

Head
Dept. Of Zoology

Yashwantrao Chavan Collage of Science karad.

Yashwantrao Chavan College of Science Karad ZOOLOGY

Shree shivaji Education Society Karad'

Yashwantrao Chavan College of Science
Karad

Department of zoology

CERTIFICATE

This is to cirtify that **Miss. Jadhav Mayuri Gangaram** has completed the project on **EFFECT OF ADULTERATED MILK ON MITOSIS IN ONION ROOT TIPS** for fulfilment of practical work prescribed in Shivaji University Kolhapur Zoology under guidance. during the Year 2018-19.

Dr.V.I. Kalamade
(under Gaidance)

Department of Zoology
Yashwantrao Chavan College of Science, Karad
Head Dept. Of Zoology

External Examiner

Yashwantrao Chavan College of Science ★ Karad ★
ZOOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF STATISTICS

PROJECT WORK

CERTIFICATE

This is certify that,

Miss. Bhosale Nikita.

Roll No. – Exam Seat No. – has actively participated

In the project work held in month of March 2018-19 & successfully completed under the guidance of Prof. S. S. Tawade.

SSTawade
9/3/2019
Signature of Guide

for SSTawade
Head Statistics department

Signature of examiner

Yashwantrao Chavan College of Science STATISTICS Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE ,KARAD

DEPARTMENT OF STATISTICS

PROJECT WORK (2018-2019)

CERTIFICATE

This is to certify that,

Shri./Smt:/Miss. Ghatage Sayali Sunil.

Roll no. ---- Exam seat no. ---- has actively participated in the project work,held in month of MARCH-2019 and successfully completed under the guidance of Prof. S. S. Tawade .

SS Tawade
9/3/2019
Signature of Guide

Examiner

for SS Tawade
Head of Department

Yashwantrao Chavan College of Science
STATISTICS

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF STATISTICS

PROJECT WORK

(2018-19)

CERTIFICATE

This is certify that, Miss. Mohite Supriya Sanjay

Roll No:- -

Exam Seat No:- - *has actively participated in the project work held in month of March 2018-19 and successfully completed under the guidance of Prof. Dr. V.B. Jagdale.*

Signature of Guide

for Head

Statistics Department

Signature of Examiner

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

Yashwantrao Chavan College of Science, Karad.



Department of Chemistry

A

Project Report On

"Chromatographic Separation Techniques"

SUBMITTED TO

Bachelor of Science in Chemistry

By

Miss. Barge Dipali Prakash 3264
Miss. Bhise Sarika Shamrao 3266

UNDER THE GUIDENCE OF

Dr. A. V. Mali

Department of Chemistry
Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

Yashwantrao Chavan College of Science, Karad.

(2018-2019)

Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

CERTIFICATE

This is to certify that

Miss. Barge Dipali Prakash 3264

Miss. Bhise Sarika Shamrao 3266

have successfully completed the Project On

"Chromatographic Separation Techniques"

for the partial fulfillment for the award of the degree of bachelor of Science in Chemistry under my supervision as per rules and regulations of Yashwantrao Chavan College of Science, Karad affiliated to Shivaji University, Kolhapur during the academic year 2018-2019. This works present bonafied work of the students.

Dr. A. V. Mali
Department of Chemistry
Assistant Professor

Examiner

Yashwantrao Chavan College of Science ★ Karad
CHEMISTRY

Dr. S. H. Burungle
HOD
Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Place : Karad.

Date :

DEPARTMENT OF CHEMISTRY

DECLARATION

This is to certify that,

Miss. Barge Dipali Prakash	*3264*
Miss. Bhise Sarika Shamrao	*3266*

have submitted the Project entitled **"Chromatographic Separation Techniques** *for the year 2018-2019. This project was carried out under my guidance and supervision.*

Dr. A. V. Mali
Project Guide

Yashwantrao Chavan College of Science ★ Karad ★
CHEMISTRY

Place : Karad.
Date :

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide ***Dr. A. V. Mali, Assistant Professor,*** *Department of Chemistry, for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.*

I also extend my sincere thanks to ***Dr. S. H. Burungale,*** *Head of Department of Chemistry for providing the laboratory facilities.*

My sincere thanks are due to ***Principal, Dr. S. B. Kengar*** *for his constant encouragement.*

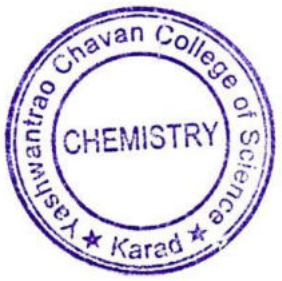
I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this Project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this Project.

Name of Student	*Roll No.*
Miss. Barge Dipali Prakash	***3264***
Miss. Bhise Sarika Shamrao	***3266***

Place : Karad

Date :



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SEPARATION TECHNIQUES: CHROMATOGRAPHY

INTRODUCTION

CHROMATOGRAPHY IS AN IMPORTANT BIOPHYSICAL TECHNIQUE THAT ENABLES THE SEPARATION, IDENTIFICATION, AND PURIFICATION OF THE COMPONENTS OF A MIXTURE FOR QUALITATIVE AND QUANTITATIVE ANALYSIS. PROTEINS CAN BE PURIFIED BASED ON CHARACTERISTICS SUCH AS SIZE AND SHAPE, TOTAL CHARGE, HYDROPHOBIC GROUPS PRESENT ON THE SURFACE, AND BINDING CAPACITY WITH THE STATIONARY PHASE. FOUR SEPARATION TECHNIQUES BASED ON MOLECULAR CHARACTERISTICS AND INTERACTION TYPE USE MECHANISMS OF ION EXCHANGE, SURFACE ADSORPTION, PARTITION, AND SIZE EXCLUSION. OTHER CHROMATOGRAPHY TECHNIQUES ARE BASED ON THE STATIONARY BED, INCLUDING COLUMN, THIN LAYER, AND PAPER CHROMATOGRAPHY. COLUMN CHROMATOGRAPHY IS ONE OF THE MOST COMMON METHODS OF PROTEIN PURIFICATION.

Chromatography is based on the principle where molecules in mixture applied ontothe surface or into the solid, and fluid stationary phase (stable phase) is separating from each other while moving with the aid of a mobile phase. The factors effective on this separation process include molecular characteristics related to adsorption (liquid-solid), partition (liquid-solid), and affinity or differences among their molecular weights. Because of these differences, some components of the mixture stay longer in the stationary phase, and they move slowly in the chromatography system, while others pass rapidly into mobile phase, and leave the system faster . Based on this approach three components form the basis of the chromatography technique.

- Stationary phase: This phase is always composed of a "solid" phase or "a layer of a liquid adsorbed on the surface a solid support".
- Mobile phase: This phase is always composed of "liquid" or a "gaseouscomponent."
- Separatedmolecules

The type of interaction between stationary phase, mobile phase, and substances contained in the mixture is the basic component effective on separation of molecules from eachother.

Chromatography methods based on partition are very effective on separation. and identification of small molecules as amino acids, carbohydrates, and fatty acids. However,

•affinity chromatographies (ie. Ion-exchange chromatography) are more effective in the separation of macromolecules as nucleic acids, andproteins.

•Paper chromatography is used in the separation of proteins, and in studies related to proteinsynthesis;

• gasliquid chromatography is utilized in the separation of alcohol, esther, lipid, and amino groups, and observation of enzymatic interactions,while

• molecular-sieve chromatography is employed especially for the determinationof molecular weights of proteins.

• Agarose-gel chromatography is used for the purification of RNA, DNA particles, and viruses .

Stationary phase in chromatography, is a solid phase or a liquid phase coated on the surface of a solidphase.

• Mobile phase flowing over the stationary phase is a gaseous or liquidphase.

• If mobile phase is liquid it is termed as liquid chromatography (LC), and if it is gas then it is called gas chromatography(GC).

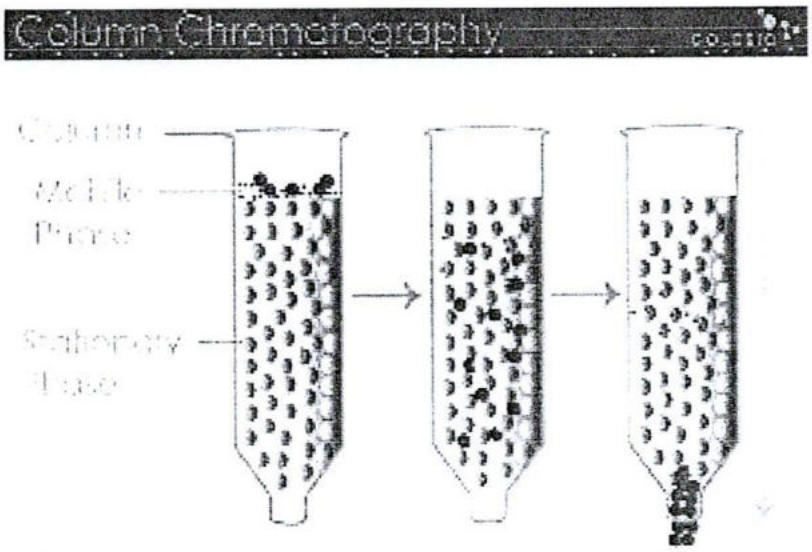
Gas chromatography is applied for gases, and mixtures of volatile liquids, and solid material. Liquid chromatography is used especially for thermal unstable, and non-volatile samples . The purpose of applying chromatography which is used as a method of quantitative analysis apart from its separation, is to achive a satisfactory separation within a suitable timeinterval. Various chromatography methods have been developed to that end. Some of them include column chromatography, thin-layer chromatography (TLC), paper chromatography, gas chromatography, ion exchange chromatography, gel permeation chromatography, high-pressure liquid chromatography, and affinity chromatography.

Types of chromatography

- Columnchromatography
- Ion-exchangechromatography
- Gel-permeation (molecular sieve)chromatography
- Affinitychromatography
- Paperchromatography
- Thin-layerchromatography
- Gaschromatography
- High-pressure liquid chromatography(HPLC)

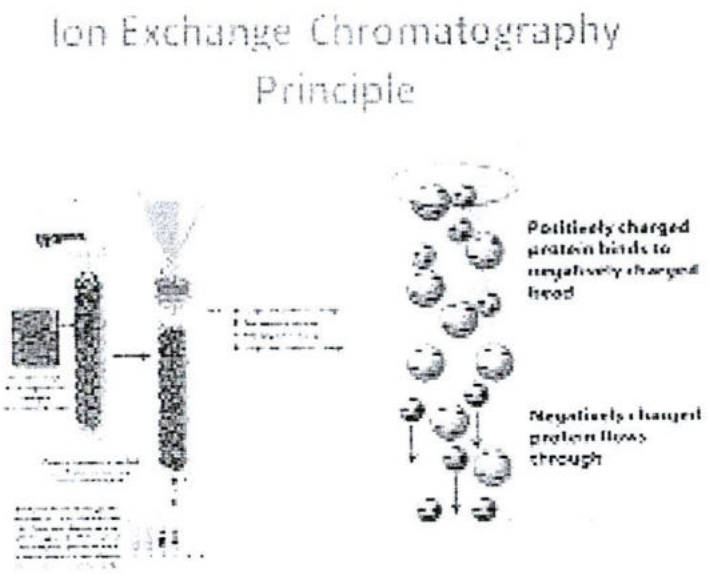
Column chromatography

Since proteins have difference characteristic features as size, shape, net charge, stationary phase used,and binding capacity, each one of these characteristic components can be purified using chromatographic methods. Among these methods,most frequently column chromatography is applied. This technique is used for the purification of biomolecules. On a column (stationary phase) firstly the sample to be separated, then wash buffer (mobile phase) are applied . Their flow through inside column material placed on a fiberglass support is ensured. The samples are accumulated at the bottom of the device in a time-, and volume-dependent manner.



Ion- exchange chromatography

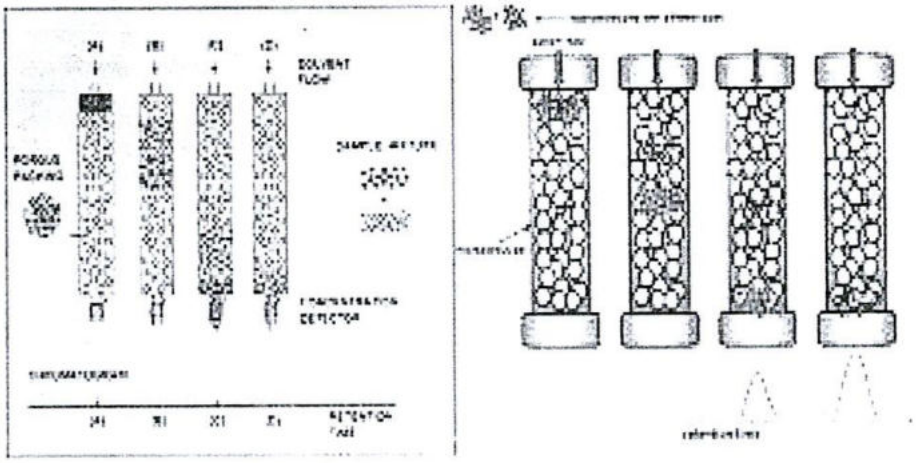
Ion- exchange chromatography is based on electrostatic interactions between charged protein groups, and solid support material (matrix). Matrix has an ion load opposite to that of the protein to be separated, and the affinity of the protein to thecolumn is achieved with ionic ties. Proteins are separated from the column either by changing pH, concentration of ion salts or ionic strength of the buffer solution . Positively charged ion-exchange matrices are called anion-exchange matrices, and adsorb negatively charged proteins. While matrices bound with negatively charged groups are known as cation-exchange matrices, and adsorb positively chargedproteins



Gel- permeation (molecular sieve) chromatography

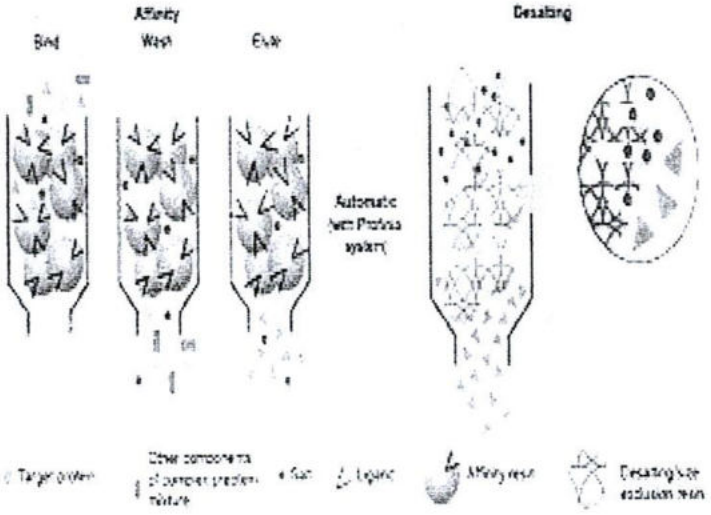
The basic principle of this method is to use dextran containing materials to separate macromolecules based on their differences in molecular sizes. This procedure is basically used to determine molecular weights of proteins, and to decrease salt concentrations of protein solutions . In a gel- permeation column stationary phase consists of inert molecules with small pores. The solution containing molecules of different dimensions are passed continuously with a constant flow rate through the column. Molecules larger than pores can not permeate into gel particles, and they are retained between particles within a restricted area. Larger molecules pass through spaces between porous particles, and move rapidly through inside the column. Molecules smaller than the pores are diffused into pores, and as molecules get smaller, they leave the column with proportionally longer retention times . Sephardic's G type is the most frequently used columnmaterial. Besides, dextran, agorose, polyacrylamide are also used as column materials

Gel Permeation Chromatography



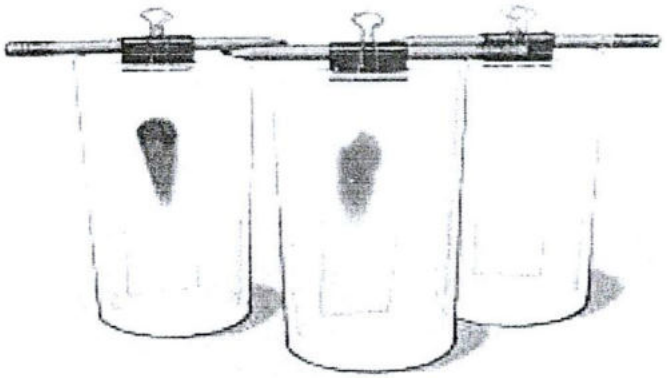
Affinity chromatography

This chromatography technique is used for the purification of enzymes, hormones, antibodies, nucleic acids, and specific proteins . A ligand which can make a complex with specific protein (dextran, polyacrylamide, cellulose etc) binds the filling material of the column. The specific protein which makes a complex with the ligand is attached to the solid support (matrix), and retained in the column,while free proteins leave thecolumn. Then the bound protein leaves the column by means of changing its ionic strength through alteration of pH or addition of a salt solution .



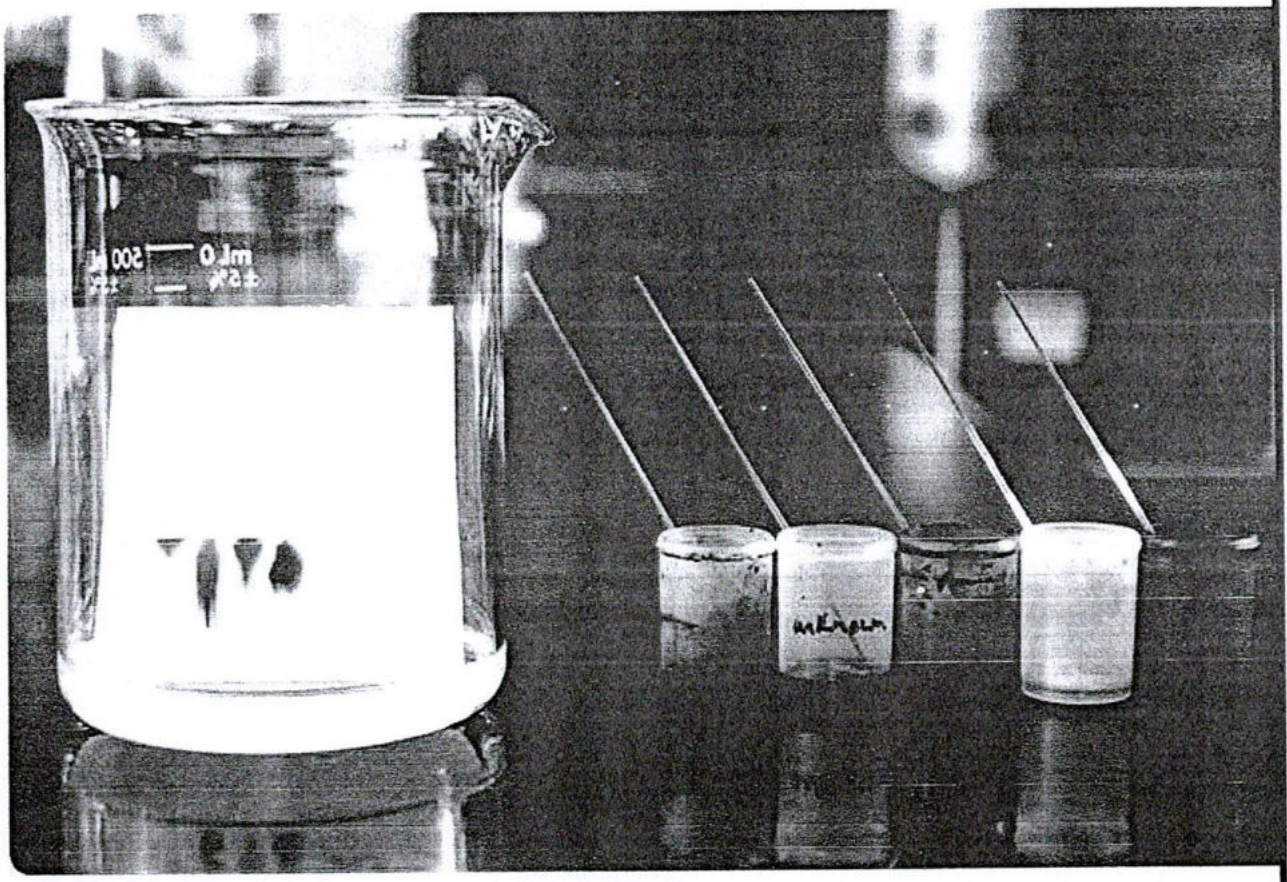
Paper chromatography

In paper chromatography support material consists of a layer of cellulose highly saturated with water. In this method a thick filter paper comprised the support, and water drops settled in its pores made up the stationary "liquid phase." Mobile phase consists of an appropriate fluid placed in a developing tank. Paper chromatography is a "liquid-liquid"chromatography



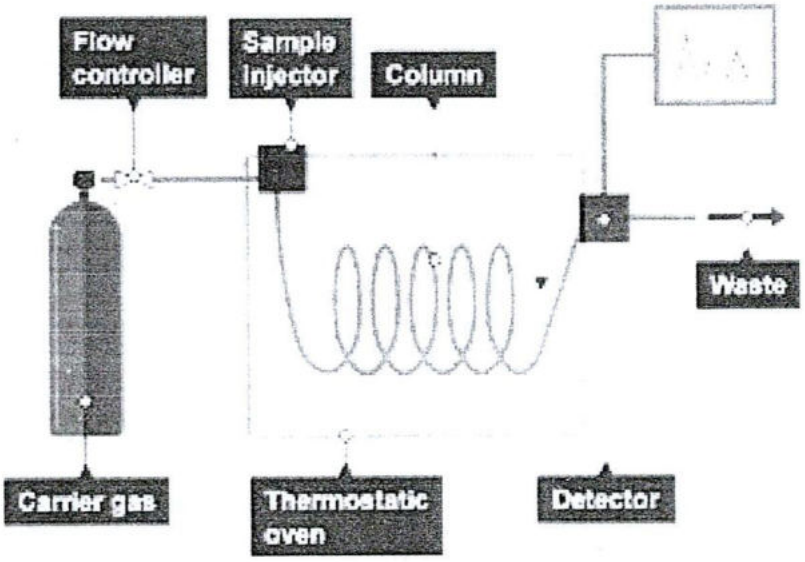
Thin-layer chromatography

Thin-layer chromatography is a "solid-liquid adsorption" chromatography. In this method stationary phase is a solid adsorbent substance coated on glass plates. As adsorbent material all solid substances used. In column chromatography (alumina,silica gel, cellulose) can be utilized. In this method, the mobile phase travels upward through the stationary phase The solvent travels up the thin plate soaked with the solvent by means of capillary action. During this procedure, it also drives the mixture priorly dropped on the lower parts of the plate with a pipette upwards with different flow rates. Thus the separation of analytes is achieved. This upward travelling rate depends on the polarity of the material, solid phase, and of the solvent . In cases where molecules of the sample are colorless, florescence, radioactivity or a specific chemical substance can be used to produce a visible coloured reactive product so as to identify their positions on the chromatogram. Formation of a visible colour can be observed under room light or UV light. The position of each molecule in the mixture can be measured by calculating the ratio between the the distances travelled by the molecule and the solvent. T his measurement value is called relative mobility, and expressed with a symbol Rf. Rf. Value is used for qualitative description of themolecules



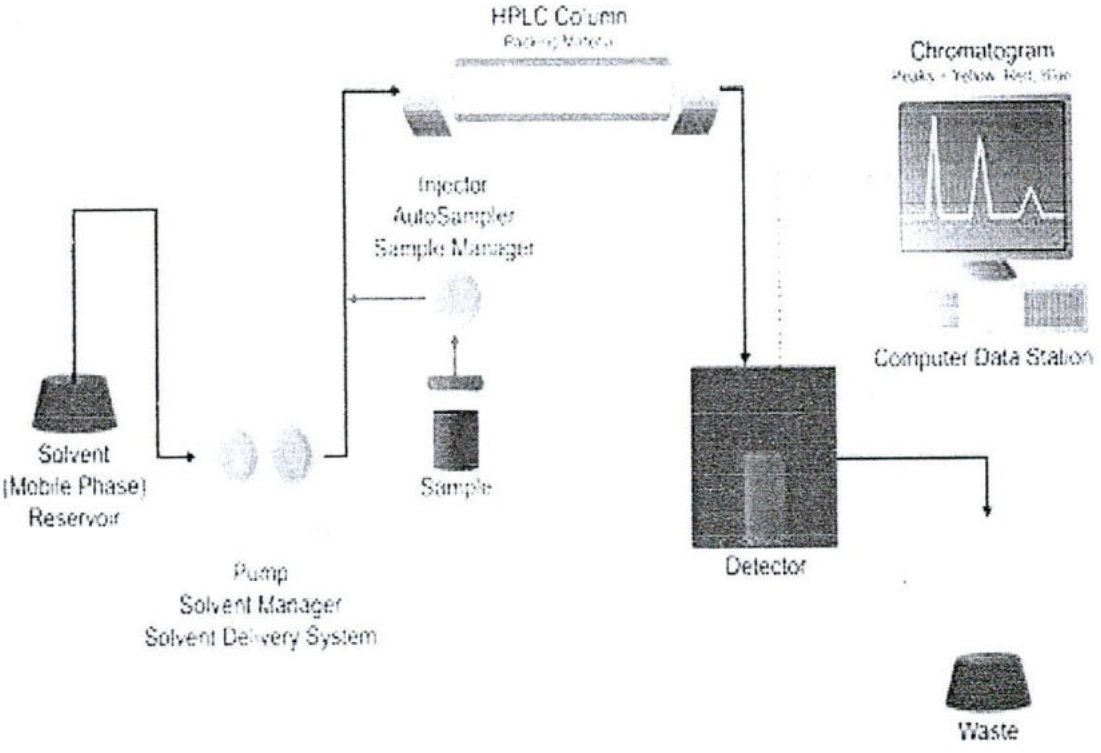
Gas chromatography

In this method stationary phase is a column which is placed in the device, and contains a liquid stationary phase which is adsorbed onto the surface of an inert solid. Gas chromatography is a "gas-liquid" chromatography. Its carrier phase consists of gases as He or N2. Mobile phase which is an inert gas is passed through a column under high pressure. The sample to be analyzed is vaporized, and enters into a gaseous mobile phase phase. The components contained in the sample are dispersed between mobile phase, and stationary phase on the solid support. Gas chromatography is a simple, multifaceted, highly sensitive, and rapidly applied technique for the extremely excellent separation of very minute molecules. It is used in the separation of very little amounts of analytes



High-prssure liquid chromatography (HPLC)

Using this chromatography technique it is possible to perform structural, and functional analysis, and purification of many molecules within a short time, This technique yields perfect results in the separation, and identification of amino acids, carbohydrates, lipids, nucleic acids, proteins, steroids, and other biologically active molecules. In HPLC, mobile phase passes through columns under 10–400 atmospheric pressure, and with a high (0.1–5 cm//sec) flow rate. In this technique, use of small particles,and application of high presure on the rate of solvent flow increases separation power, of HPLC and the analysis is completed within a short time. Essential components of a HPLC device are solvent depot, high- pressure pump, commerciallprepared column, detector, and recorder. Duration of separation is controlled with the aid of a computerized system, and material isaccrued



Application areas of chromatography in medicine

Chromatography technique is a valuable tool for biochemists, besides it can be applied easily during studies performed in clinical laboratories For instance, paper chromatography is used to determine some types of sugar, and amino acids in bodily fluids which are associated with hereditary metabolic disorders. Gas chromatography is used in laboratories to measure steroids, barbiturates, and lipids. Chromatographic technique is also used in the separation of vitamins, andproteins.

Conclusion

Initially chromatographic techniques were used to separate substances based on their color as was the case with herbal pigments. With time its application area was extended considerably. Nowadays, chromatography is accepted as an extremely sensitive, and effective separation method. Column chromatography is one of the useful separation, and determination methods. Column chromatography is a protein purification method realized especially based on one of the characteristic features ofproteins. Besides, these methods are used to control purity of a protein. HPLC technique which has many superior features including especially its higher sensitivity, rapid turnover rate, its use as a quantitative method, can purify amino acids, proteins, nucleic acids, hydrocarbons, carbohydrates, drugs, antibiotics, andsteroids.

Referance

1)Text book of TY BSc-Phadke prakashan

2)Chromatography-Wikipedia

3)Chromatography -YouTube

Yashwantrao Chavan College of Science, Karad.



Department of Chemistry

A

Project Report On

"DETERMINATION OF ADULTERATION AND ESTIMATION OF CASEIN, FAT IN MILK"

SUBMITTED TO

Bachelor of Science in Chemistry

By

Miss. Londhe Rupali Jagannath	*3351*
Miss. Londhe Snehal Jagannath	*3352*

UNDER THE GUIDENCE OF

Shri. G. B. Dhake

Department of Chemistry
Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

Yashwantrao Chavan College of Science, Karad.

(2018-2019)

Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

CERTIFICATE

This is to certify that

Miss. Londhe Rupali Jagannath 3351

Miss. Londhe Snehal Jagannath 3352

have successfully completed the Project On

"Determination of Adulteration and Estimation of Casein, Fat in Milk"

for the partial fulfillment for the award of the degree of bachelor of Science in Chemistry under my supervision as per rules and regulations of Yashwantrao Chavan College of Science, Karad affiliated to Shivaji University, Kolhapur during the academic year 2018-2019. This works present bonafied work of the students.

Shri. G. B. Dhake
Department of Chemistry
Assistant Professor

Examiner

Dr. S. H. Burungle
HOD
Department of Chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Place : Karad.

Date :

DEPARTMENT OF CHEMISTRY

DECLARATION

This is to certify that,

Miss. Londhe Rupali Jagannath	***3351***
Miss. Londhe Snehal Jagannath	***3352***

have submitted the Project entitled ***"Determination of Adulteration and Estimation of Casein, Fat in Milk"*** *for the year 2018-2019. This project was carried out under my guidance and supervision.*

Shri G. B. Dhake
Project Guide

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Place : Karad.
Date :

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide ***Shri. G. B. Dhake, Assistant Professor,*** *Department of Chemistry, for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.*

I also extend my sincere thanks to ***Dr. S. H. Burungale,*** *Head of Department of Chemistry for providing the laboratory facilities.*

My sincere thanks are due to ***Principal, Dr. S. B. Kengar*** *for his constant encouragement.*

I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this Project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this Project.

Name of Student	*Roll No.*
Miss. Londhe Rupali Jagannath	***3351***
Miss. Londhe Snehal Jagannath	***3352***

Place : Karad

Date :



Yashwantrao Chavan College of Science, Karad.



Department of Chemistry

A

Project Report On

"ANALYHSIS OF NITROGEN IN FERTILIZERS"

SUBMITTED TO

Bachelor of Science in Chemistry

By

Mr. Mandake Aniket Arjun 3359

Miss. Mane Anikta Anandrao 3360

UNDER THE GUIDENCE OF

Dr. S. D. Jadhav

Department of Chemistry
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Yashwantrao Chavan College of Science, Karad.

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Yashwantrao Chavan College of Science, Karad.

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This is to certify that

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Miss. Mane Anikta Anandrao 3360

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"ANALYSIS OF NITROGEN IN FERTILIZERS"

for the partial fulfillment for the award of the degree of bachelor of Science in Chemistry under my supervision as per rules and regulations of Yashwantrao Chavan College of Science, Karad affiliated to Shivaji University, Kolhapur during the academic year 2018-2019. This works present bonafied work of the students.

Dr. S. D. Jadhav
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Assistant Professor

Examiner

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Department of Chemistry

Head
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Yashwantrao Chavan College of Science, Karad

Place : Karad.

Date :

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

DEPARTMENT OF CHEMISTRY

DECLARATION

This is to certify that,

Mr. Mandake Aniket Arjun	*3359*
Miss. Mane Anikta Anandrao	*3360*

have submitted the Project entitled "Analysis of Nitrogen in fertilizers" for the year 2018-2019. This project was carried out under my guidance and supervision.

Dr. S. D. Jadhav
Project Guide

Yashwantrao Chavan College of Science ★ Karad ★
CHEMISTRY

Place : Karad.
Date :

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide ***Dr. S. D. Jadhav Assistant Professor,*** *Department of Chemistry, for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.*

I also extend my sincere thanks to ***Dr. S. H. Burungale,*** *Head of Department of Chemistry for providing the laboratory facilities.*

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I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this Project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this Project.

Name of Student	*Roll No.*
Mr. Mandake Aniket Arjun	*3359*
Miss. Mane Anikta Anandrao	*3360*

Place : Karad

Date :

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Yashwantrao Chavan College of Science, Karad.



Department of Chemistry

A

Project Report On

"STERILIZATION OF WATER BY BLEACHING POWDER"

SUBMITTED TO

Bachelor of Science in Chemistry

By

Miss. Bhoite Nisha Hanmant — *Roll No. 3267*
Miss. Bhosale Madhuri Popat — *Roll No. 3268*

UNDER THE GUIDENCE OF

Shri. R. S. Patil

Department of Chemistry
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Department of Chemistry
Yashwantrao Chavan College of Science, Karad.

(2018-2019)

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Department of Chemistry

CERTIFICATE

This is to certify that

Miss. Bhoite Nisha Hanmant *Roll No. 3267*

Miss. Bhosale Madhuri Popat *Roll No. 3268*

have successfully completed the Project On

"Sterilization of Water by Bleaching Powder"

for the partial fulfillment for the award of the degree of bachelor of Science in Chemistry under my supervision as per rules and regulations of Yashwantrao Chavan College of Science, Karad affiliated to Shivaji University, Kolhapur during the academic year 2018-2019. This works present bonafied work of the students.

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Assistant Professor

Examiner

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Dr. S. H. Burungle
HOD
Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Place : Karad.

Date :

DEPARTMENT OF CHEMISTRY

DECLARATION

This is to certify that,

Miss. Bhoite Nisha Hanmant *Roll No. 3267*

Miss. Bhosale Madhuri Popat *Roll No. 3268*

*have submitted the Project entitled "**Sterilization of Water by Bleaching Powder**" for the year 2018-2019. This project was carried out under my guidance and supervision.*

Shri. R. S. Patil

Project Guide

Place : Karad.

Date :

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide ***Shri. R. S. Patil, Assistant Professor,*** *Department of Chemistry, for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.*

I also extend my sincere thanks to ***Dr. S. H. Burungale,*** *Head of Department of Chemistry for providing the laboratory facilities.*

My sincere thanks are due to ***Principal, Dr. S. B. Kengar*** *for his constant encouragement.*

I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this Project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this Project.

Name of Student	*Roll No.*
Miss. Bhoite Nisha Hanmant	***3267***
Miss. Bhosale Madhuri Popat	***3268***

Place : Karad

Date :

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Department of Chemistry

A

Project Report On

"DETERMINATION OF ADULTERATION AND ESTIMATION OF CASEIN, FAT IN MILK"

SUBMITTED TO

Bachelor of Science in Chemistry

By

Mr. Dongare Shubham Mahesh 3297
Mr. Gaikwad Akshay Satyawan 3298

UNDER THE GUIDENCE OF

Shri. G. B. Dhake

Department of Chemistry
Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

Yashwantrao Chavan College of Science, Karad.

(2018-2019)

Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

CERTIFICATE

This is to certify that

Mr. Dongare Shubham Mahesh *3297*

Mr. Gaikwad Akshay Satyawan *3298*

have successfully completed the Project On

"*Determination of Adulteration and Estimation of Casein, Fat in Milk*"

for the partial fulfillment for the award of the degree of bachelor of Science in Chemistry under my supervision as per rules and regulations of Yashwantrao Chavan College of Science, Karad affiliated to Shivaji University, Kolhapur during the academic year 2018-2019. This works present bonafied work of the students.

Shri. G. B. Dhake
Department of Chemistry
Assistant Professor

Examiner

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Dr. S. H. Burungle
HOD
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Place : Karad.

Date :

DEPARTMENT OF CHEMISTRY

DECLARATION

This is to certify that,

Mr. Dongare Shubham Mahesh 3297

Mr. Gaikwad Akshay Satyawan 3298

have submitted the Project entitled **"Determination of Adulteration and Estimation of Casein, Fat in Milk"** *for the year 2018-2019. This project was carried out under my guidance and supervision.*

Shri. G. B. Dhake

Project Guide

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Place : Karad.

Date :

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide ***Shri. G. B. Dhake, Assistant Professor,*** *Department of Chemistry, for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.*

I also extend my sincere thanks to ***Dr. S. H. Burungale,*** *Head of Department of Chemistry for providing the laboratory facilities.*

My sincere thanks are due to ***Principal, Dr. S. B. Kengar*** *for his constant encouragement.*

I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this Project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this Project.

Name of Student	*Roll No.*
Mr. Dongare Shubham Mahesh	***3297***
Mr. Gaikwad Akshay Satyawan	***3298***

Place : Karad

Date :

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Department of Chemistry

A

Project Report On

"FOOD ADULTERATION"

SUBMITTED TO

Bachelor of Science in Chemistry

By

Miss. Jagadale Pallavi Rajesh *3324*
Miss. Jagtap Prajakta Shankar *3326*

UNDER THE GUIDENCE OF

Dr. V. P. Lad

Department of Chemistry
Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

Yashwantrao Chavan College of Science, Karad.

(2018-2019)

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CERTIFICATE

This is to certify that

Miss. Jagadale Pallavi Rajesh 3324

Miss. Jagtap Prajakta Shankar 3326

have successfully completed the Project On

"*Food Adulteration*"

for the partial fulfillment for the award of the degree of bachelor of Science in Chemistry under my supervision as per rules and regulations of Yashwantrao Chavan College of Science, Karad affiliated to Shivaji University, Kolhapur during the academic year 2018-2019. This works present bonafied work of the students.

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Assistant Professor

Examiner

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Dr. S. H. Burungle
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Department of Chemistry
Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Place : Karad.

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DECLARATION

This is to certify that,

Miss. Jagadale Pallavi Rajesh *3324*

Miss. Jagtap Prajakta Shankar *3326*

have submitted the Project entitled **"Food Adulteration"** *for the year 2018-2019. This project was carried out under my guidance and supervision.*

Dr. U. P. Lad

Project Guide

Place : Karad.

Date :

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide ***Dr. U. P. Lad, Assistant Professor,*** *Department of Chemistry, for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.*

I also extend my sincere thanks to ***Dr. S. H. Burungale,*** *Head of Department of Chemistry for providing the laboratory facilities.*

My sincere thanks are due to ***Principal, Dr. S. B. Kengar*** *for his constant encouragement.*

I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this Project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this Project.

Name of Student	*Roll No.*
Miss. Jagadale Pallavi Rajesh	***3324***
Miss. Jagtap Prajakta Shankar	***3326***

Place : Karad

Date :

GR-117

(39)

28

Yashwantrao Chavan College of Science,

Vidyanagar, Karad



Under Shivaji University, Kolhapur

Environmental Study

B.Sc. II

2018-2019

A Project Report

On

"To Study Role Of Biodiesel In Non-Renewable Energy Resources"

Submitted by

Sr. No.	Name of Students	Roll No.	Exam Seat No.	Sign
1.	Miss. Divya Dhondiram Bhagwat	1595	30138	Bhagwat
2.	Mr. Ashutosh Suryakant Dawari	1596	30036	Dawari
3.	Mr. Shambhuraj Pandurang Detake	1597	29702	Detake
4.	Miss. Pooja Satish Kadam	1598	30139	Kadam
5.	Mr. Vijay Dattatray Khochare	1601	29865	[illegible]

Under the guidance of

Mrs. P.A. Patil (M.Sc. B.Ed. BJC)

Exam Seat No. -

Date: 05/03/2019

Roll No.- 1595, 1596, 1597, 1598, 1601

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ..Divya..Dhandiram..Bhagwat.....

..Mr..Ashutosh.Suryakant.Dawari.....

..Mr..Shambhuraj.Pandurang.Detake.....

..Miss..Pooja.Satish.kadam.....

..Mr...Vijay.Dattatray.khachare.....

of B. Sc. II Environmental Science have completed the Environmental project satisfactorily on "To.study.Role.of..Biodiesel.In.Non.-Renewable.Energy.Resources"

prescribed by Shivaji University, Kolhapur as fulfillment of syllabus during the year 2018-19.

Co-ordinator

Head of Dept.

HEAD
Department of Pollution Studies
Yashwantrao Chavan College of Science
Vidyanagar, KARAD-415 110, Maharashtra

Principal

Yashwantrao Chaven College of Science, Karad

Yashwantrao Chavan College of Science * Karad *
POLLUTION

Yashwantrao Chavan College of Science,

Vidyanagar, Karad



Under Shivaji University, Kolhapur

Environmental Study

B.Sc. II

2018-2019

A Project Report

On

"To Study the Environmental Importance of Gram Swachhata Abhiyan"

Submitted by

Sr. No.	Name of Students	Roll No.	Exam Seat No.	Sign
1.	Mr. Katare Swapnil Ashok	1599	30048	
2.	Mr. Katkar Ganesh Bhagwan	1600	30140	
3.	Miss. More Arati Narayan	1602	30141	
4.	Mr. Nalawade Nikhil Maruti	1603	29697	
5.	Mr. Sable Saurabh Chandrakant	1608	29762	

Under the guidance of

Mrs. P.A. Patil (M.Sc. B.Ed. BJC)

Exam Seat No. -

Date: 06/03/2019

Roll No.- 1599, 1600, 1602, 1603, 1608

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Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ..Katare..Swapnil..Ashok.....

.Mr..Katkar..Ganesh..Bhagwan.....

.Miss..Mane...Arati..Narayan.....

.Mr..Nalawade..Nikhil..Maruti.....

.Mr..Sable...Saurabh..chandrakant.....

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Co-ordinator

Head of Dept.

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Department of Pollution Studies
Yashwantrao Chavan College of Science
Vidyanagar, KARAD-415 110, Maharashtra

Principal

Principal,
Yashwantrao Chavan College
of Science, Karad

Yashwantrao Chavan College of Science * Karad * POLLUTION

Shivaji Shikshan Sanstha's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



Environmental Studies

A

Project Report

On,

" Pouching Of Animals "

Class - B. cs II

2018-2019

Submitted by,

Sr. No.	Name of Student	Roll no.	Exam no
1	Mr . Kachre Rahul Rajendra	7221	1708
2	Mr. Nadaf Arbaj Najir	7226	1722
3	Mr. Salunkhe Prathmesh Ganesh	7235	1712
4	Mr. Shirke Shubham Krishnat	7240	1739
5	Mr. Siddiqui Alim Abid	7241	1709

Under guidance of,

Patil P.A (M.sc Bed. BJc)

Exam Seat No. -

Date: 9-3-2019.

Roll No.- 7221, 7226, 7235, 7240, 7241.

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

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Environmental Studies

CERTIFICATE

This is to certify that Mr. / ~~Miss.~~ Kachare Rahul Rajendra

Nadaf Azbaj Najiz

Salunkhe Prathmesh Ganesh

Shizke Shubham Kaishnat

Siddiqui Alim & Abid

of B. C.S. II Environmental Science have completed the Environmental project satisfactorily on

"pouching of animals."

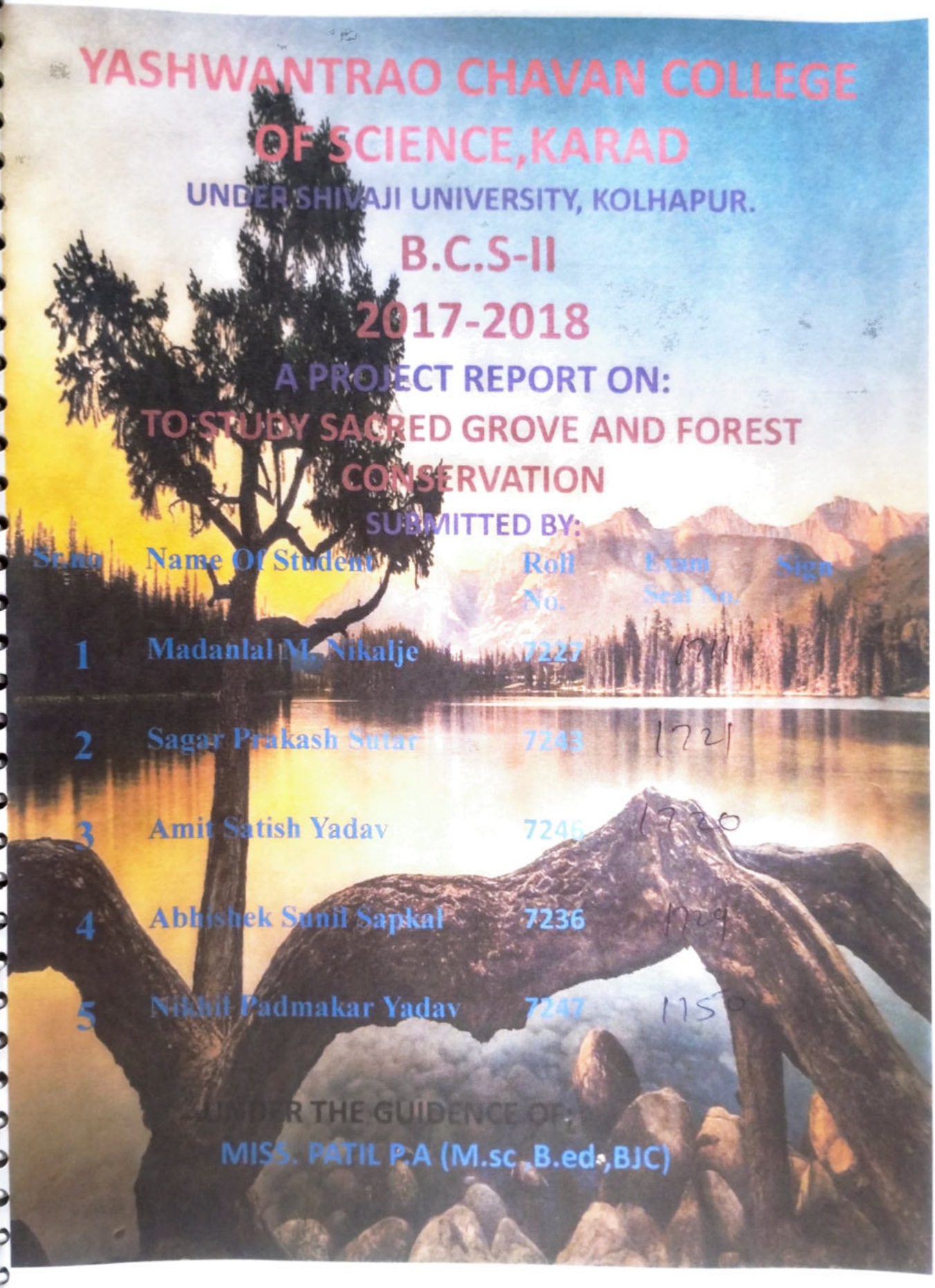
prescribed by Shivaji University, Kolhapur as fulfillment of syllabus during the year 2018-19.

Co-ordinator | **Head of Dept.** (Incharge) | **Principal**

HEAD
Department of Pollution Studies
Yashwantrao Chavan College of Science
Vidyanagar, KARAD-415 110, Maharashtra

Principal,
Yashwantrao Chavan College of Science, Karad.

Yashwantrao Chavan College of Science * Karad * POLLUTION



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

UNDER SHIVAJI UNIVERSITY, KOLHAPUR.

B.C.S-II

2017-2018

A PROJECT REPORT ON:

TO STUDY SACRED GROVE AND FOREST CONSERVATION

SUBMITTED BY:

Sr.no	Name Of Student	Roll No.	Exam Seat No.	Sign
1	Madanlal M. Nikalje	7227	1721	
2	Sagar Prakash Sutar	7243	1724	
3	Amit Satish Yadav	7246	1730	
4	Abhishek Sunil Sapkal	7236	1729	
5	Nikhil Padmakar Yadav	7247	1150	

UNDER THE GUIDENCE OF:

MISS. PATIL P.A (M.sc ,B.ed ,BJC)

Exam Seat No. -

Date: 9-3-2019

Roll No.- 7236, 7243, 7246, 7247, 7227

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

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Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ..Madanlal.....mohanrao....nikalje.

...Sagar.....prakash.....sutar.....

....Amit.....satish.....yadav.....

....Abhishek.....Sunil.....sapkal.....

...Nikhil.....padmakar.....yadav.....

of B. C.S. II Environmental Science have completed the Environmental project satisfactorily on "To...study...sacred....grave...and...forest...conservation"

prescribed by Shivaji University, Kolhapur as fulfillment of syllabus during the year 2018-19.

Co-ordinator

Head of Dept. (Incharge)

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Vidyanagar, KARAD 415 110, Maharashtra

Principal

Principal,
Yashwantrao Chavan College of Science, Karad.

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

(4)

27

Shivaji University, Kolhapur

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

VIDYANGAR,KARAD.415124



B.Cs. II

2018-19

Environmental Studies

A Project Report On

"TO STYDYIMPACT OF FESTIVAL ON ENVIRONMENT "

Submitted

By

Sr.No	Name	Roll No.	Exam Seat No.
1	MISS. NIPASALE MEGHA VIJAY	7229	1751
2	MISS. PATIL POONAM TANAJI	7231	1752
3	MISS. PISAL ASHWINI SHIVAJI	7233	1752
4	MISS. RAKATE PREETI PRASHANT	7234	1716
5	MISS. MANE BHAGYASHRI AANANDRAO		

Under The Guidance

Miss. Patil P.A. (M.Sc.B.Ed.Jc)

Exam Seat No. -

Date: 11-03-2019.

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

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This is to certify that Mr. / Miss. Nipasale Megha Vijay

Patil Poonam Tanaji

Pisal Ashwini Shivaji

Rakate Preeti Prashant

Mane Bhagyashri Aanandrao

of B.C.S. II Environmental Science have completed the Environmental project satisfactorily on "To study Impact of Festival on Environment".

prescribed by Shivaji University, Kolhapur as fulfillment of syllabus during the year 2018-19.

Co-ordinator

Head of Dept.

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Principal

Principal,
Yashwantrao Chavan College
of Science, Karad.

Yashwantrao Chavan College of Science Karad
POLLUTION

(10)

25

Shivaji University, Kolhapur

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

VIDYANGAR,KARAD.415124



BCS - II

2018-19

Environmental Studies

A Project Report On

"IMPACT OF URBANIZATION"

Submitted

By

Sr.No	Name	Roll No.	Exam Seat No.
1	MISS.BAGAL NEHA DHNAJI	7202	1727
2	MISS. BAGAL YOGITA DATTATRAY	7203	1741
3	MISS. DESHMUKH CHAITALI PRAKASH	7209	1733
4	MISS. DESHMUKH SUPRIYA LALASO	7211	1734
5	MISS. NIKAM DHANASHRI ADHIKRAO	7228	1713

Under The Guidance

Miss. Patil P.A. (M.Sc.B.Ed.Jc)

Exam Seat No. -

Date: 11/3/2019

Roll No.- 7202, 7203, 7209, 7211, 7228

Shri Shivaji Education Society Karad, Board for Higher Education's

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Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ...BAGAL...NEHA...DHANAJI.....

...BAGAL....YOGITA...DATTATRAY.....

...DESHMUKH....CHAITALI...PRAKASH.....

...DESHMUKH....SUPRIYA...LALASO.....

...NIKAM...DHANASHRI ADHIKRAO.....

of B.C.S. II Environmental Science have completed the Environmental project satisfactorily on

".....IMPACT....OF....URABANIZATION....."

prescribed by Shivaji University, Kolhapur as fulfillment of syllabus during the year 2018-19.

Co-ordinator

Head of Dept.

HEAD
Department of Pollution Studies
Yashwantrao Chavan College of Science
Vidyanagar, KARAD-415 110, Maharashtra

Principal

Principal,
Yashwantrao Chavan College
of Science, Karad

Yashwantrao Chavan College of Science
POLLUTION
Karad

Shivaji Shikshan Sanstha's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



Environmental Studies

A

Project Report

On,

"Krishna river aquatic plant"

Class – B.c.s. II

2018-2019

Submitted by,

Sr. No.	Name of Student	Roll no.	Exam no
1	Mr . Kadam Amar Shankar	7222	1748
2	Miss.jagadale Snehankita Sunil	7219	1731
3	Miss. Jadhav Swapnaja Sambhaji	7218	1728
4	Miss. Chavan Amruta Nandkumar	7205	1742
5	Miss. Sonawale shraddha Devanand	7242	1740

Under guidance of,

Patil P.A (M.sc Bed. BJc)

Exam Seat No. -

Date: 11/3/2019

Roll No.- 7222, 7219, 7205, 7242, 7218

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. Mr. Kadam Amar Shankar

Miss. Jagadale Snehankita Sunil

Miss: Jadhav: Swapnaja sambhaji

Miss: Chavan Amruta Nandkumar

Miss: Sonawale shraddha Devanand

of B. C.S. II Environmental Science have completed the Environmental project satisfactorily on "Krishna river aquatic plants"

prescribed by Shivaji University, Kolhapur as fulfillment of syllabus during the year 2018-19.

Co-ordinator

Head of Dept.

Department of Pollution Studies
Yashwantrao Chavan College of Science
Vidyanagar, KARAD-415 110, Maharashtra

Principal

Principal,
Yashwantrao Chavan College
of Science, Karad.

Yashwantrao Chavan College of Science ★ POLLUTION ★ Karad

23 G·86

Yashwantrao Chavan College Of Science, Vidyanagar, Karad.



B.SC.II

ENVIROMENTAL STUDIES

2018-2019

A PROJECT REPORT

ON

"Solid Waste Management: of Malkapur City"

SUBMITTED BY

Sr. No	Name of the student	Roll No.	Exam Seat No.
1	Mr. Tupe Shubham Dinkar	1455	30158
2	Mr. Sonar Shubham Avinash	1450	30155
3	Mr. Sathe Nayan Manikrao	1456	~~29947~~ 30154
4	Mr. Taware Siddesh Rajendra	1451	29947
5	Mr. Shende Manthan Keshav	1449	

UNDER THE GUIDANCE OF

Mrs.P.A.Patil (M.SC., B.ed BJC)

G-86

Exam Seat No. -

Date: 5/03/2019

Roll No.- 1455, 1451, 1460, 1456, 1449

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ....Tupe...Shubham...Dinkar.....

....Sonar....Shubham...Avinash.....

....Sathe....Nayan....Manikrao.....

.....Tawane....Siddhesh...Rajendra.....

.....Shende...Manthan....Keshave.....

of B. Sc. II Environmental Science have completed the Environmental project satisfactorily on

"....To...study...solid...waste....management...of...Malkapur"

prescribed by Shivaji University, Kolhapur as fulfillment of syllabus during the year 2018-19.

Co-ordinator

Head of Dept.

HEAD (In-charge)
Department of Pollution Studies
Yashwantrao Chavan College of Science
Vidyanagar, KARAD-415 110, Maharashtra

Principal

Principal,
Yashwantrao Chavan College
of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

27

YASHWANTRAOCHAVANCOLLASGE OF SCIENCE ,

KARAD



Environmental StudiesA

Project Report On,

" To Study The Conservation Method of natural resources"

Class – B.C.S II

2018-2019

Submitted by,

Sr. no	Name of the student	Roll no	Exam seat no	sign
1	*RUSHIKESH RAMESH GURAV*	7216	1746	
2	*HARSHADA VASANT PATIL*	7230	1736	
3	*SUNIL BASU PAWAR*	7232	1737	
4	*DIPALI DADASO SHEWALE*	7237	1730	
5	SAKSHI DHANANJAY WAYKASKAR	7245	1753	

UNDER GUIDANCE OF

Mrs. Patil. P. A(M.sc Bed. BJC)

Exam Seat No. -

Date: 11-03-2019

Roll No.- 7216, 7230, 7232, 7237, 7245.

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ...Rushikesh....Ramesh....Gurav.....

Miss. ...Harshada....Vasant....Patil.....

Mr. ...Sunil....Basu....pawar.....

Miss. ...Dipali....Dadaso....Shewale.....

Miss ...Sakshi....Dhananjay....Waykaskar.....

of B. C.S. II Environmental Science have completed the Environmental project satisfactorily on

"...To....study....the....conservation....method....of....natural....resources.

prescribed by Shivaji University, Kolhapur as fulfillment of syllabus during the year 2018-19.

Co-ordinator

Head of Dept.

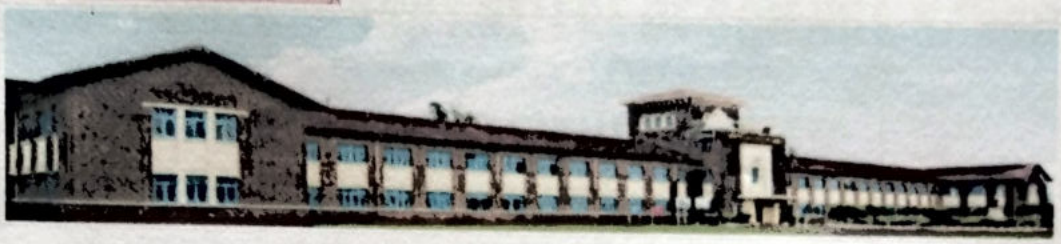
HEAD
Department of Pollution Studies
Yashwantrao Chavan College of Science
Vidyanagar, KARAD-415 110, Maharashtra

Principal

Principal,
Yashwantrao Chavan College
of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

YASHWANTRAO CHAVAN COLLAGE OF SCIENCE ,KARAD



Department of computer science

BCS—II2018–2019

A project report on:

"TO STUDY THE IMPORTANCE OF BRICK INDUSTRY"

STUDENTS DECLARATION

Sr. no	Name of the student	Roll no	Exam seat no	Sign
I	Indrajit Deshmukh	7210	1744	
II	Sandhya Gophane	7215	1745	Gophane.
III	Vrushali Gurav	7217	1747	Gurav.V4
IV	Priyanka Khalati	7224	1735	Khalati P.M
V	Mayur Tadavi	7244	1720	

PLACE - KARAD

DATE- 11/03/2019

MRS. P. A. PATIL(MSC B.ED B.JC)

Exam Seat No. -

Date: 11/03/2019

Roll No.- 7210, 7215, 7217, 7224, 7244

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ..Deshmukh..Indrajit...Dattatray.....

..Gophane....Sandhya...Sambhaji.....

...Gurav.....Vrushali....Uttamrao.....

...Khalati....Priyanka....Mahadev.....

....Tadavi....Mayur.....Chhabu.....

of B. C.S. II Environmental Science have completed the Environmental project satisfactorily on

"...To..study...the...importance...of...brick...industry....."

prescribed by Shivaji University, Kolhapur as fulfillment of syllabus during the year 2018-19.

Co-ordinator

Head of Dept.

HEAD
Department of Pollution Studies
Yashwantrao Chavan College of Science
Vidyanagar, KARAD 415 110, Maharashtra

Principal

Principal,
Yashwantrao Chavan College
of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

Yashwantrao chavan college of Science

Vidyanagar, karad



B.Sc. III

Department of Pollution

2018-19

A Project Report

On

"To Study waste water treatment in sugar industry.

Submitted by

Sr. No	Name of The Student	Roll No	Exam Seat No	Sign
1	Mr. Devkar Akash Suresh	3151		
2	Mr. Mulik Shailesh Shivaji	3160		

Under the Guidance of

Prof. P.A. Patil (M.Sc ,B. Ed. BJC)

Exam Seat No. -
Roll No.- 3180

Date: 20/03/2019.

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE
Reg: RQ91/5237

Accredited at the B^{++} level by NAAC, Bangalore

Department of Pollution

This is to certify that Shri / Miss. mulik shailesh shivaji
Devkar Aakash S.

of B. Sc. III Pollution has completed Project work on
"To study wastewater treatment in sugar industry."

satisfactorily prescribed by Shivaji University, Kolhapur as fulfillment of practical syllabus during the year 2018 - 2019.

Teacher In-charge | Examiner | Head (Incharge)

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

Yashwantrao Chavan College of Science
Vidyanagar, Karad



B.Sc. III

Department of Pollution

2018-2019

A Project Report
On

"To study Impact of stone crushing on environment"

Submitted by

Sr.no	Name of Student	Roll no	Exam seat No	Sign
1	Mr. Kudale Akash R.	3152		A.R.kudale
2	Mr. Patil Jivan B.	3154		Patil

Under the guidance of
Prof. P. A. Patil (M.Sc., B.Ed. BJC)

Exam Seat No. -
Roll No.- 3152 , 3154

Date: 12-03-2019

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE
Reg: RQ91/5237

Accredited at the B++ level by NAAC, Bangalore

Department of Pollution

This is to certify that Shri / Miss. ① kudale Akash Rajendra
② Patil Jivan Bhauso

of B. Sc. III Pollution has completed Project work on

"To Study Impact of Stone Crushing on environment"

satisfactorily prescribed by Shivaji University, Kolhapur as fulfillment of practical syllabus during the year 2018 - 2019.

Teacher In-charge

Examiner 20.3.19

Head (Incharge)

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

Yashwantrao Chavan Collage Of Science
Vidyanagar, Karad



Department of -Pollution

B.Sc - III

2018-2019

A

Project Report On,
To Study Disaster Management Flood ; Uttarakhand

Submitted by

Sr.no	Name of the student	Roll no	Exam seat No	sign
1	Mr. Pawar Vaibhav Mahendra	3155		
2	Mr. Mane Rahul Tatyasaheb	3153		

Under the guidance of

Mrs. P. A. Patil (M.Sc.,B.ed., B.J.C.)

Exam Seat No. -
Roll No.- 3155, 3153

Date: 12/03/2019

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE
Reg: RQ91/5237

Accredited at the B++ level by NAAC, Bangalore

Department of Pollution

This is to certify that Shri / Miss. Pawar Vaibhav Mahendra 2) Mane Rahul Tatyasaheb

of B. Sc. III Pollution has completed Project work on "To Study Disastee Management Flood in Uttarakhand" *satisfactorily prescribed by Shivaji University, Kolhapur as fulfillment of practical syllabus during the year 2018 - 2019.*

Teacher In-charge Examiner Head. (Mehetre)

Yashwantrao Chavan College of Science Karad POLLUTION

Yashwantrao Chavan College of ScienceVidyanagar, Karad



B.Sc. III

Department of Pollution

2018-2019

A Project Report
On
"To study Impact of Bio Gas Plant "

Submitted by

Sr.no	Name of Student	Roll no	Exam seat No	Sign
1	Mr Chavan Rohit .A	3157		
2	Mr. Jadhav Nilesh .K	3159		

Under the guidance of
Prof. P. A. Patil (M.Sc., B.Ed. BJC)

Exam Seat No. -
Roll No.- 3157, 3159

Date: 20-03-2019

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE
Reg: RQ91/5237

Accredited at the B++ level by NAAC, Bangalore

Department of Pollution

This is to certify that Shri / Miss. Charan Rohit Abaso Jadhav Nilesh krishnat.

of B. Sc. III Pollution has completed Project work on

"To Study importances of Biogas"

satisfactorily prescribed by Shivaji University, Kolhapur as fulfillment of practical syllabus during the year 2018 - 2019.

Teacher In-charge Examiner Head. Incharge

Yashwantrao Chavan College of Science POLLUTION Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Bhagwat Divya Dhondiram** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Biological Activity of Theraputical Potensial of *Algae Marmelos*" presents her bonafide work in B.Sc- III of the academic year 2019-2020

AKRandive

Mrs. A. K. Randive
PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Borkar Rutuja Madhukar** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antimicrobial activity in chicken egg white protein" presents her bonafide work in B.Sc- III of the academic year 2019-2020.

Miss S.A.Shikalgar
PROJECT SUPERVISOR

EXAMINAR

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Borkar Sneha Shankar** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Effect of food preservatives on normal human gut microflora" presents her bonafide work in B.Sc- III of the academic year 2019-2020.

Miss S.A.Shikalgar
PROJECT SUPERVISOR

EXAMINAR

CO-ORDINATOR

Course Co-ordinator

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Chavan Nilam Sanjay** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and characterization of bacteria from herbal medicinal syrup" presents her bonafide work in B.Sc- III of the academic year 2019-2020.

SSNalawade

Mrs. S. S. Nalawade

PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Gaikwad Pooja Vishwas** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and identification of trichoderma spp." presents her bonafide work in B.Sc- III of the academic year 2019-2020.

Miss S.A.Shikalgar
PROJECT SUPERVISOR

KGaikwad
EXAMINAR

SAShikalgar
CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Kadam Dipali Tanaji** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and characterization of endophytic bacteria from garlic." presents her bonafide work in B.Sc- III of the academic year 2019-2020.

AKRandive

Mrs. Randive A.K.
PROJECT SUPERVISOR

Kgaikwad

EXAMINAR

SASHikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★
BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Kadam Pooja Satish** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and characterization of protease producing bacillus species from soil of diary industry." presents her bonafide work in B.Sc- III of the academic year 2019-2020.

SSNalawade

Mrs. Nalawade S.S.
PROJECT SUPERVISOR

KBKulkarni

EXAMINAR

SPShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★
BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Kajari Neha Mansing** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antibacterial activity and phytochemical analysis of tridax procumbeans." presents her bonafide work in B.Sc-III of the academic year 2019-2020.

SSNalawade

Mrs. Nalawade S.S.
PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SASHikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Katkar Ganesh Bhagwan** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Comparative and Effective study of biofertilizerand encapsulation process on plant growth." presents her bonafide work in B.Sc- III of the academic year 2019-2020.

SSNalawade

Mrs. Nalawade S.S.
PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Khochare Vijay Dattatray** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antimicrobial study of medicinal plant and antibiotic against the UTI." presents her bonafide work in B.Sc- III of the academic year 2019-2020.

SAShikalgar

Miss. Shikalgar S.A.
PROJECT SUPERVISOR

Kawikwad

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Lokhande Shivani Jeevan** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and screening of antibiotic producing Actinomycetes from soil " presents her bonafide work in B.Sc-III of the academic year 2019-2020.

SSNalawade

Mrs. Nalawade S.S.
PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SAShitalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Mane Charushila Hemant** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and optimization of Lipase producing bacteria from soil" presents her bonafide work in B.Sc- III of the academic year 2019-2020.

AKRandive

Mrs. Randive A.K.
PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Mane Kirti Jaysing** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled " Extraction of bromelain enzyme from pineapple and study the activity of antibrowning activity on apple." presents her bonafide work in B.Sc- III of the academic year 2019-2020.

AKRandive

Mrs. Randive A. K.
PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SAShitalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. More Arati Narayan** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Studies on isolation and characterization of pre existing probiotic yeast from home made soyacurd and pineapple juice." presents her bonafide work in B.Sc- III of the academic year 2019-2020.

SSNalawade

Mrs. Nalawade S.S.
PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SAShirsatgere

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Patil Prashant Dinkar** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation of nicotine degrading bacteria." presents her bonafide work in B.Sc- III of the academic year 2019-2020.

SSNalawade

Mrs. Nalawade S.S.
PROJECT SUPERVISOR

RGaikwad

EXAMINAR

SASShitalgave

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Pol Shraddha Mohan** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and characterization of protease from Leguminous seeds" presents her bonafide work in B.Sc- III of the academic year 2019-2020.

Patil

Mrs. Patil V.R.
PROJECT SUPERVISOR

K Gaikwad

EXAMINAR

Sashikalgaro

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Sartape Supriya Sidhu** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled " Bioethenol production from waste banana peel" presents her bonafide work in B.Sc- III of the academic year 2019-2020.

Patil

Mrs. Patil V.R.
PROJECT SUPERVISOR

Kaikewad

EXAMINAR

SASHIKALGERE

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Shaikh Shifa Saied** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antibacterial activity of honey on staphylococcus aurious and E-coli " presents her bonafide work in B.Sc- III of the academic year 2019-2020.

AKRandive

Mrs. Randive A.K.
PROJECT SUPERVISOR

Kbaikwad

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Shinde Aishwarya Jaysing** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antimicrobial effect of different spices on tooth plaque forming bacteria" presents her bonafide work in B.Sc-III of the academic year 2019-2020.

Patil

Mrs. Patil V.R.
PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SASHikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★
BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

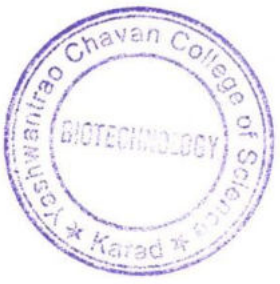
DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Shinde Maheshwari Bhairavnath** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "To isolate plastic degrading bacteria from soil" presents her bonafide work in B.Sc- III of the academic year 2019-2020.

Mrs. Patil V.R.		
PROJECT SUPERVISOR	EXAMINAR	CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Sonawale Shivani Ramesh** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Production of amylase from fruit peel using Aspergikkus niger by solid state fermentation" presents her bonafide work in B.Sc- III of the academic year 2019-2020.

AKRandive

Mrs. Randive A.K.
PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SASHikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Vishwakarma Reshma Surybhan** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation of Gossypol and analysis of phytochemicals of cotton seed extract" presents her bonafide work in B.Sc- III of the academic year 2019-2020.

Mrs. Patil V.R.
PROJECT SUPERVISOR

EXAMINAR

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Katare Swapnil Ashok** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "To study the raw and distilled urine sample effect on fungi" presents her bonafide work in B.Sc- III of the academic year 2019-2020.

SSNalawade

Mrs. Nalawade S.S.
PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Dawari Ashutosh Suryakant** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Production of biodiesel from waste vegitable oil" presents her bonafide work in B.Sc- III of the academic year 2019-2020.

SSNalawade

Mrs. Nalawade S.S.
PROJECT SUPERVISOR

KGaikwad

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★
BIOTECHNOLOGY

Roll No:3171

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Bhagwat Divya Dhodiram** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

AKRandive

Mrs.A.K.Randive

Project Guide

mulape

Examiner

Ashikalgaat

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll N0 3172

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Borkar Rutuja Madhukar** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

SAShikalgar.

Miss. S.A.Shikalgar

Project Guide

mulape

Examiner

SNalawade.

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad *
BIOTECHNOLOGY

Roll N0 3173

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Borkar Sneha Shankar**of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

Miss S.A.Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll N0 3174

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Chavan Nilam Sanjay** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

SSNalawade

Mrs. S.S.Nalawade

Project Guide

mulape

Examiner

SShikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll N0 3175

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Gaikwad Pooja Vishwas** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

Sashikalgar.

Miss. S.A . Shikalgar

Project Guide

mulape.

Examiner

Sashikalgar.

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll N0 3176

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Kadam Dipali Tanaji** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

AKRandive

Mrs.A.K.Randive

Project Guide

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Examiner

sashikalgeer

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll N0 3177

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Kadam Pooja Satish** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

SSNalawade

Mrs. S . S. Nalawade

Project Guide

mulape

Examiner

Ashikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll N0 3178

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Kajari Neha Mansing** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

SSNalawade

Mrs.S.S.Nalawade

Project Guide

mulape

Examiner

Sashikatgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY

Roll N0 3179

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr.Katkar Ganesh Bhagwan** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

SSNalawade

Miss. S.S.Nalawade

Project Guide

mulape

Examiner

sashikalgaz

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

Roll N0 3180

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr.Khochare Vijay Jeevan** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

SAShikalgar.

Miss. S.A . Shikalgar

Project Guide

mulape

Examiner

SAShikalgar.

Course Coordinator

Course Co-ordinator
Department of Biotechnology



Roll N0 3181

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss Lokhande Shivani Jeevan** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

SSNalawade

Miss. S.S.Nalawade

Project Guide

mulape

Examiner

Ashikalgoe

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll N0 3182

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Mane Charushila Hemant** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

Miss. S.A . Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

Roll N0 3183

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Mane Kirti Jayasing** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

AKRandive

Mrs.A.K.Randive

Project Guide

mulase

Examiner

sshikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology



Roll N0 3184

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. More Arati Narayan**of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

Mrs. S . S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

Roll N0 3185

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Prashant Dinkar Patil** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

SSNalawade

Mrs. S . S. Nalawade

Project Guide

mulape

Examiner

Ashikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY

Roll N0 3186

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Pol Shraddha Mohan** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

Patil

Mrs. Patil V. R

Project Guide

mulape

Examiner

Ashtekalgaar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
Karad

Roll N0 3188

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Supriya Sidhu** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

AKRandive

Mrs.A.K.Randive

Project Guide

mulape

Examiner

Ashtekar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * BIOTECHNOLOGY * Karad

Roll N0 3189

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Shaikh Shifa Saied** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

AKRandive

Mrs.A.K.Randive

Project Guide

mulape

Examiner

Ashi Kalgoe

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Chavan College ★ Karad ★

Roll N0 3190

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Shinde Aishwarya Jayasing**of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

AKRandive

Mrs.A.K.Randive

Project Guide

mulape

Examiner

Ashikalgaonkar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY

Roll N0 3191

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Shinde Maheshwari Bhairavnath** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

Mrs. Patil. V. R.

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll N0 3192

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Sonawale Shivani Ramesh** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

AKRandive

Mrs.A.K.Randive

Project Guide

mulape

Examiner

Ashikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Chavan College ★ Karad ★

Roll N0 3193

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Vishwakarma Reshma Surybhan** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

Patil

Mrs. V. R. Patil

Project Guide

Mulape

Examiner

Ashikalgaz

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll N0 3194

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Katare Swapnil Ashok** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

SSNalawade

Mrs. S. S. Nalawade

Project Guide

mulape

Examiner

Ashikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Roll N0 3195

"One with the downtrodden and the under privileged"

Shivaji Shikshan Sanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Dawari Ashutosh Suryakant** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2019-2020

SSNalawade

Mrs. S. S. Nalawade

Project Guide

mulape

Examiner

Ashikalgaz

Course Coordinator

Course Co-ordinator
Department of Biotechnology



Roll No. -5001

Exam seat no. 3196

Date- 22/09/2020

Shri. Shivaji Education Society, Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department Of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr.Bamane Vinayak Jaysing** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical course VIII: Project work for the M.Sc.-II(Semester IV) Microbiology course and his project report entitled Screening, Isolation and Characterization of Cyclodextrin glycosyl transferase producing bacteria from soil.represents his bonafide work in the M.Sc..Part II (Semester IV) of academic year 2019-2020.

Prof.T.B.Sawant

Project supervisor/Guide

Dr.N.R.Shaikh

Head,Department of microbiology

Yashwantrao Chavan College of Science KARAD

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL No.: 5002.

EXAM No.: 3197

Date: 22/09/2020

Shri Shivaji Education Society, Karad

Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Sanket Shirish Bhedasgaonkar.** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his Project Work entitled **"Application of Bacteriophages as Biocontrol agents against Extended Spectrum β-lactamase producing Multi-Drug Resistant bacteria isolated from pathogenic clinical samples."** represents his bonafide work in the M.Sc. II (Semester-IV) of the academic year 2019 – 2020.

Dr. J. U. Patil.

Project Supervisor

Dr. N. R. Shaikh.

Head of the Department

Chavan College of Science Yashwantrao KARAD

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO. :
EXAM SEAT NO. :

DATE :

Shri. Shivaji Education Society, Karad

Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD .

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **MRS.BHOLE DIPALI RAJARAM.** has carried out the required project work prescribed by Shivaji University, Kolhapur in practical course – VIII Project work for M.Sc. part (Semester –IV) Microbiogy course and her project work entitled as " **STUDY OF RHIZOSPHERIC MICROFLORA OF *PARTHENIUM HYSTEROPHORUS* AND SCREENING FOR IT'S PLANT GROWTH PROMOTING ACTIVITIES**" represents her bonafide work in the M.Sc.-II (Semester IV) of the academic year 2019-2020.

Dr. N. R. Shaikh
Project Supervisor

Examiner

Dr. N. R. Shaikh
DEPARTMENT OF MICROBIOLOGY

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD

DATE:-

EXAM NO :- 3200
ROLL NO :- 5005

Shri Shivaji Education Society, Karad
Board of Higher Education's

Yashwantrao Chavan College of Science, Karad
Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss. Buva Priyanka Shrikant has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc.Part II (Semester IV) Microbiology course and her Project Work entitled as "ISOLATION AND CHARACTERIZATION OF LEAD METAL RESISTANT BACTERIA FROM INDUSTRIAL SOIL" represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2019 –2020.

Prof. Dr.A.A. Raut.
Project Supervisor

EXAMINER

Dr. N.R.Shaikh
Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science *KARAD*

EXAM NO :-

Shri Shivaji Education Society,
Karad Board for Higher
Education's

Yashwantrao Chavan College of Science,
Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that MISS CHOUGALE MAYURI RAJENDRA has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "Isolation and characterization of potassium ferrocyanide degrading bacteria from natural source." represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019

Dr. J.U.Patil.
Project Supervisor

EXAMINER

Head of the Department
HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

Exam no: 3206

Date:21/09/2020

Roll no: 5007

Shri. Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of

Microbiology

LABORATORY CERTIFICATE

This is to certify that Mr. Gadivadar sachin vilas has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project work for the M.Sc. part II (semester IV) Microbiology course and her PROJECT REPORT entitled "Multi drug resistant bacteria isolated fish and fish handlers" represents him bonafide work in M.Sc. part II (semester IV) of the academic year 2019-2020.

Dr.N.R.Shaikh

(Project Guide)

Examiner

Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science *KARAD*

ROLL NO :- 5009

EXAM NO :- 3211

DATE:- 22/09/2020.

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Mr. JADHAV ROHIT BALASO **has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his Project Work entitled as** "ISOLATION, CHARACTERIZATION AND OPTIMIZATION OF PRODIGIOSIN PRODUCING *SERRATIA MARCESCENS* AND IT'S APPLICATIONS" **represents his bonafide work in the M.Sc. II (Semester-IV) of the academic year 2019 -2020.**

Prof. T. B. Sawant.

Project Supervisor

Dr. N. R. Shaikh.

Head of the Department

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY

Chavan College of Science Yashwantrao KARAD

SHRI SHIVAJI EDUCATION SOCIETY KARAD

BOARD FOR HIGHER EDUCATION'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that MISS.SUPANESAGAR DIGAMBAR has carried out the required project work prescribed by the Shivaji university, Kolhapur in PRACTICAL COURSE VIII: PROJECT WORK for the M.SC part - II (semester –IV) Microbiology course and his PROJECT REPORT entitled, "ISOLATION AND CHARACTERIZATION OF PATHOGENIC BACTERIA FROM MEAT AND CHICKEN SLAUGHTER HOUSES IN KARAD" in the M.Sc. Part-II (Semester-IV) of academic year 2019-2020.

Miss. V. N. KUMBHAR
Project supervisor

DR. N. R. SHAIKH
Examiner

Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Chavan College of Science Yashwantrao KARAD

Exam Seat No: **Date:**

Roll No: 5011

SHRI SHIVAJI EDUCATION SOCIETY KARAD
BOARD FOR HIGHER EDUCATION'S
YASHWANTRAO CHAVAN COLLEGE OF SCIENCE
KARAD
DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that MISS. KUMBHAR POOJA SURESH has carried out the required project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII : PROJECT WORK for the M.Sc part – II (Semester–IV) Microbiology course and her PROJECT REPORT entitled, "ISOLATION AND CHARACTERISATION OF PECTINASE PRODUCING BACTERIA FROM THE INTESTINE OF SILKWORM LARVAE *(BOMBYX MORI)*" in the M.Sc Part II(semester-IV) of academic year(2019-2020)

Prof. T. B. Sawant
Project supervisor

Dr. N. R. Shaikh
Examiner

Department of Microbiology
HEAD
DEPARTMENT OF MICROBIOLOGY

Chavan College of Science * Yashwantrao * KARAD

Exam Seat No. : 3221

Date: 22/09/2020

Roll No. : 5012

SHRI SHIVAJI EDUCATION SOCIETY, KARAD

BOARD FOR HIGHER EDUCATION'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that **MISS. MADGUNDI REVATI BALAJI** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project Work for the M.Sc. part - II (Semester –IV) Microbiology Course and her Project Report entitled as **"STUDIES ON BACTERIAL PIGMENT PRODUCTION AND THEIR APPLICATIONS."** Represents her bonafide work in the M.Sc. Part-II (semester-IV) of academic year **2019-2020.**

DR. N. R. SHAIKH

(Project supervisor)

Examiner

Head of Department

Yashwantrao Chavan College of Science KARAD

HEAD
DEPARTMENT OF MICROBIOLOGY

Roll Number - 5013

Exam Number – 3222

Date –

Shree Shivaji Education Society, Karad

Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF MICROBIOLOGY

Laboratory Certificate

This is to certify that ***Mr. AMIR DILAVAR MULLA*** has satisfactorily carried out the project work prescribed by the Shivaji University, Kolhapur in ***PRACTICAL COURSE VIII*** : For the M.Sc. Part II (Semester IV) Microbiology course and her Project Report entitled ***"EFFECT OF ELECTROMAGNETIC RADIATION OF MOBILE WAVES ON GROWTH OF MICROORGANISMS"*** represents her bonafide work in the M.Sc. Part II (Semester IV) of the academic year 2019 -2020.

(Dr. Raut A. A.)

Project Supervisor

(Dr. N. R. Shaikh)

Head Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Exam Seat No. :

Date:

Roll No. : 5014

SHRI SHIVAJI EDUCATION SOCIETY KARAD

BOARD FOR HIGHER EDUCATION'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Mr .MULLA MUNNA KARIM has carried out the required project work prescribed by the shivaji university, Kolhapur in PRACTICAL COURSE VIII: PROJECT WORK for the M.SC part - II (semester –IV) Microbiology course and her PROJECT REPORT entitled, **BACTERIOLOGICAL ANALYSIS OF WELL WATER SAMPLES** in the M.Sc. part-II (semester-IV) of academic year 2019-2020.

PROF.T.B.SAWANT
Project Supervisor

Examiner

DR. N. R. SHAIKH
Head, Department
Of Microbiology.

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Exam Seat No. : 3226

Date: 22-09-20

Roll No. : 5015

Shri Shivaji Education Society Karad

Board for higher education's

YASHWASNTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Nadaf Sanover Vajir** has satisfactory carried out the required project work Prescribed by the Shivaji University, Kolhapur in practical Course viii: project work for the m.sc part-ii (semester- IV) Microbiology course and her PROJECT REPORT entitled **"Isolation and characterization of paranitrophenol degrading bacteria From dump yard soil"** represents her bonafide work in the M.Sc. Part-II (semester-IV) of academic year 2019-2020.

PROF: Dr.J.U.Patil

Project Supervisor

Yashwantrao Chavan College of Science * KARAD *

Dr.N.R.Shaikh

Head, Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Roll no= 5017
Exam seat no= 3228

Shri Shivaji Education Society , Karad
Board for Higher Education's
YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD .
Department of Microbiology
LABORATORY CERTIFICATE

This is to certify that MRS.Ohal Sanghamitra Arjun has carried out the required project work prescribed by Shivaji University,Kolhapur in practical course – VIII Project work for M.Sc. part (Semester –IV) Microbiogy course and her project work entitled as "Isolation and characterization of hydrocarbon degrading bacteria from petrol contaminated soil " represents her bonafide work in the M.Sc.-II (Semester IV) of the academic year 2019-2020.

Yashwantrao Chavan College of Science *KARAD*

HEAD
DEPARTMENT OF MICROBIOLOGY

Dr. N. R. Shaikh
Shaikh
Project Supervisor

Dr. N. R.

Examiner

DEPARTMENT OF

ROLL NO :- 5018

EXAM NO :-3230

DATE:

Shri Shivaji Education Society, Karad Board

for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **MISS. SAYALI DILIP PATIL** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as **Isolation and characterization of endophytic bacteria from *Saussurea obvallata*_."** represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2019 –2020.

Dr. A.A.RAUT

Project Supervisor

EXAMINER

Dr. N.R. SHAIKH

Head of the Department

Chavan College of Science Yashwantrao KARAD

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO.:- 5020 **DATE : 22th Sept. 2020**

EXEM NO.:- 3232

Shri Shivaji Education Society Karad,

YASHWANTRO CAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Vishal Babaso Pujari** has satisfactorily carried out the required Project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VII: Project Work for the M. Sc. Part - II (Semester - IV) Microbiology Course and his PROJECT REPORT entitled **"PRODUCTION, PURIFICATION AND CHARACTERIZATION OF BACITRACIN FROM BACILLUS SPP ISOLATED FROM SOIL"** represents his bonafide work in the M. Sc. Part – II (Semester - IV) of academic year 2019 - 2020.

Prof. T. B. Sawant
Project Supervisor / Guide

Dr. N. R. Shaikh
Head, Department of Microbiology

Chavan College of Science Yashwantrao KARAD

HEAD
DEPARTMENT OF MICROBIOLOGY

Exam Seat No. : 3234 Date:21-9-2020

Roll No. : 5021

SHRI SHIVAJI EDUCATION SOCIETY KARAD

BOARD FOR HIGHER EDUCATION'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that MISS. SAPATE MAYURI MAHADEV has carried out the required project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: PROJECT WORK for the M.SC part - II (semester –IV) Microbiology course and her PROJECT REPORT entitled, "ISOLATION, PRODUCTION AND APPLCATION OF TANNASE ENZYME PRODUCED BY BACTERIA ISOLATED FROM GARDEN SOIL" in the M.Sc. Part-II (semester-IV) of academic year 2019-2020.

DR. J. U. PATIL,
Project supervisor

Examiner

DR. N. R. SHAIKH
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

Edit with WPS Office

Shri Shivaji Education Society,

Karad Board for Higher

Education's.

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. SHAIKH MUSTAKEEM ILAHI** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Sem. IV) Microbiology course and his Project Work entitled as **" Morphological and Biochemical Characterization Of Culturable Epilithic and Endolithic Bacteria From Rocks Of Kaas Pathar,Satara,Maharashtra"** represents his bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Dr. J. U. Patil.

Project Supervisor.

EXAMINER

Head Of Department.

HEAD
DEPARTMENT OF MICROBIOLOGY

Chavan College of Science KARAD Yashwantrao

Exam Seat No. : 3240

Date:

Roll No. : 5023

SHRI SHIVAJI EDUCATION SOCIETY KARAD

BOARD FOR HIGHER EDUCATION'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that MISS.SUPANESAGAR DIGAMBAR has carried out the required project work prescribed by the shivaji university, Kolhapur in PRACTICAL COURSE VIII: PROJECT WORK for the M.SC part - II (semester – IV) Microbiology course and her PROJECT REPORT entitled, "ISOLATION, AND CHARACTERIZATION OF DRUG RESISTANCE BACTERIA FROM SPOILED AMOXICILLIN- POTASSIUM CLAVULANATE TABLATE" in the M.Sc. part-II (semester-IV) of academic year 2019-2020.

DR. A.A. RAUT,

Project supervisor

Examiner

DR. N. R. SHAIKH

Department of Microbiology

HEAD

DEPARTMENT OF MICROBIOLOGY

Chavan College of Science Yashwantrao KARAD

ROLL No.: 5024

Date 22/09/2020

EXAM No.: 3242

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Sarita Jayant Udagiri** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled "STUDIES ON EXTRACTION AND PURIFICATION OF EXOPOLYSACCHARIDE AND THEIR EMULSIFICATION ACTIVITY" represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2019 –2020.

Dr. J. U. Patil

Project Supervisor

EXAMINER

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Chavan College of Science Yashwantrao KARAD

Exam seat No. : 3201

Roll No. : 5025

Date : 22th Sept.2020

SHRI SHIVAJI EDUCATION SOCIETY, KARAD

BOARD FOR HIGHER EDUCATION'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that **MISS. CHOTHE SHRADDHA RAJENDRA** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project Work for the M.Sc. part - II (Semester –IV) Microbiology Course and her Project Report entitled as **"ISOLATION AND CHARACTERIZATION OF PECTINASE PRODUCING BACTERIA AND THEIR APPLICATIONS."** Represents her bonafide work in the M.Sc. Part-II (semester-IV) of academic year **2019-2020.**

DR. N. R. SHAIKH

(Project supervisor)

Examiner

Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD

ROLL. NO : 5026

EXAM. NO : 3203

DATE: 22thSept. 2020

Shri Shivaji Education Society, Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. CHOUGULE BHAKTI SHITAL** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project entitled **"CHARACTERIZATION OF HALOPHILIC ISOLATES AND STUDIES ON THEIR ANTIFUNGAL ACTIVITY"** represents his work in the M.Sc. part II (semester IV) of the academic year 2019-2020.

Miss. V..N..Kumbhar

Project Supervisor / Guide

Dr. N.R. Shaikh

Head of the Department

Chavan College of Science Yashwantrao KARAD

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO :- 5027

EXAM NO :- 3204

DATE :- 21/ 09/ 2020

Shri . Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College Of Science, karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that MISS.DNAGE DIVYA DILIP has carried out the required project work prescribed by Shivaji University, Kolhapur in practical course VIII : Project work for M.Sc. part II (Semester IV) Microbiology course and her project work entitled as " Screening, isolation and characterization of siderophore producing endophytic bacteria from *Cicer arietinum, Pisum sativum* and *Cpasicum annuum* plant." Represents her work in the M. Sc. II (Semester IV) of the academic year 2019 and 2020.

Prof. T. B. Sawant Examiner

Project supervisor

DR. N. R. SHIKH

Head of Department of Microbiology

Yashwantrao Chavan College of Science * KARAD *

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL No.: 5028.

Date: 00/00/2020.

EXAM No.:3205

Shri Shivaji Education Society, Karad
Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE ,KARAd

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss Archana vilas devkar . has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester-IV) Microbiology course and his Project Workentitled "Screening Of L-Glutaminase Producing Bacteria Isolated From Soil "represents his bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Dr. J.U. Patil

Project Supervisor

EXAMINER

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

ROLL NO: - 5029

DATE:

EXAM NO: - 3208

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. JADHAV POOJA LALSING** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as **"Effect of temperature and pH on the production of Exopolysaccharide from Halophilic Bacteria & Study of its anticoagulant activity."** represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2019 –2020.

V. N. Kumbhar.

Project Supervisor

EXAMINER

Head of the Department

Yashwantrao Chavan College of Science * KARAD

HEAD
DEPARTMENT OF MICROBIOLOGY

SHRI SHIVAJI EDUCATION SOCIETY KARAD

BOARD FOR HIGHER EDUCATION

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that MISS. JADHAV POURNIMA PANDURANG has carried out the required project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII : PROJECT WORK for the M.SC part - II (semester IV) Microbiology course and her PROJECT REPORT entitled, **Isolation and Studies of Endophytic Bacteria from *Canna indica*"** in the M.Sc. part-II (semester-IV) of academic year 2019-2020.

DR. A. A. Raut
Project supervisor

DR. N. R. SHAIKH
Head, Department of Microbiology

Yashwantrao Chavan College of Science * KARAD *

HEAD
DEPARTMENT OF MICROBIOLOGY

Exam Seat No: 3212 **Date:** 22/09/2020

Roll No: 5032 **PRN No. -** 2018030471

Shri Shivaji Education Society Karad's

Board for Higher Education,

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Mr. Jadhav Suraj Mahadev has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course VIII: Project work for the M.Sc. part- II (semester- IV) Microbiology course and his, PROJECT PEPORT entitled, "ISOLATION OF CAUSATIVE AGENT OF DOWNY MILDEW DISEASE OF GRAPEVINE AND IN-VITRO SCREENING OF ANTIFUNGAL BACTERIA AGAINST IT" represents his bonafide work in the M.Sc. part- II (semester- IV) of academic year 2019-2020.

V.N.Kumbhar

Miss. V.N. Kumbhar
Project Supervisor

Examiner

Dr. N.R. Shaikh
Head
Department of Microbiology

Chavan College of Science Yashwantrao KARAD

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO:- 5034 DATE:-

EXAM NO :-

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad Department of Microbiology.

LABORATORY CERTIFICATE

This is to certify that **Mr. KUMBHAR AMOL ANANDA.** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as **"ISOLATION AND CHARACTERIZATION OF SODIUM DODECYL SULPHATE DEGRADING ORGANISMS FROM SOIL" represents her bonafide work in the M.Sc. II (Semester-IV) of the academic year 2019 –2020.**

Prop. T. B. SAWANT.

Project Supervisor **EXAMINER** **Head of the Department**

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL No.: 5035

Date: 22/09/2020.

EXAM No.: 3216

Shri Shivaji Education Society, Karad

Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. GITANJALI PARSHURAM KUMBHAR** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Sem. IV) Microbiology course and his Project Work entitled as "Innovative Approaches Using Lichen Enriched Media to Improve Isolation Of Lichen Associated Bacteria and Role in Phosphate Solubilizing and Nitrogen Fixing Activity" represents his bonafide work in the M.Sc. II (Semester-IV) of the academic year 2019 –2020.

Prof. T. B. Sawant
Project Supervisor

EXAMINER

Head of the Department

Chavan College of Science Yashwantrao KARAD

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO.:- 5036

EXAM NO.:- 3217

DATE : 22th Sept. 2020

Shri Shivaji Education Society Karad,

YASHWANTRO CAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Omkar Ashok Kumbhar** has satisfactorily carried out the required Project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VII: Project Work for the M. Sc. Part - II (Semester - IV) Microbiology Course and his PROJECT REPORT entitled **"ISOLATION OF BACILLUS THURINGIENSIS FROM COTTON FARMING SOIL AND IT'S BIOCONTROL POTENTIAL AGAINST MOSQUITO LARVAE"** represents his bonafide work in the M. Sc. Part – II (Semester - IV) of academic year 2019 - 2020.

Prof. T. B. Sawant

Project Supervisor / Guide

Dr. N. R. Shaikh

Examiner

Head, Department of Microbiology

Chavan College of Science * Yashwantrao * KARAD

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL No.: 5037.

Date: 22/9/2020.

EXAM No.: 3219

Shri Shivaji Education Society, Karad

Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss. Kumbhar Priyanka Shrirang has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Sem. IV) Microbiology course and his Project Work entitled as "Effect of carbon source and salt concentration on the production of exopolysaccharides from halophilic bacteria and determining its antimicrobial activity." represents his bonafide work in the M.Sc. II (Semester-IV) of the academic year 2018 –2019.

Dr. J. U. Patil.

Project Supervisor

Yashwantrao Chavan College of Science * KARAD *

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Roll Number - 5039

Exam Number – 3224

Date – 22/09/2020

Shree Shivaji Education Society, Karad

Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF MICROBIOLOGY

Laboratory Certificate

This is to certify that ***Miss. Mulla Najneen Shakil*** has satisfactorily carried out the project work prescribed by the Shivaji University, Kolhapur in ***PRACTICAL COURSE VIII*** : For the M.Sc. Part II (Semester IV) Microbiology course and her Project Report entitled ***"OPTIMIZATION OF MEDIUM COMPONENTS FOR HALOCIN PRODUCTION BY HALOPHILES USING THE PLACKETT-BURMAN DESIGN, AND STUDY OF ITS ANTIBACTERIAL ACTIVITY"*** represents her bonafide work in the M.Sc. Part II (Semester IV) of the academic year 2019 -2020.

(V. N. Kumbhar)

Project Supervisor

(Dr. N. R. Shaikh)

Head Department of Microbiology

Yashwantrao Chavan College of Science * KARAD *

HEAD
DEPARTMENT OF MICROBIOLOGY

ROLL NO:- 5041 DATE:

EXAM NO :-3229

Shri Shivaji Education Society, Karad

Board for Highis Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. PATIL PRANAY PANDITRAO** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his Project Work entitled as **Designing Of Cost Effective Substitute Microbiological Medium By Using "Fish Waste Hydrolysate"** represents his work in the M.Sc. II (Semester-IV) of the academic year 2019 –2020.

Dr. A. A. Raut,
Project Supervisor

EXAMINER

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

Exam Seat No: Date:

Roll No:

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Miss. Sandee Najarin Mansur has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course VIII: project work for the M.Sc. part –II (semester – IV) Microbiology course and her PROJECT REPORT entitled, "ISOLATION AND CHARACTERIZATION OF ENDOFUNGAL BACTERIA FROM PLEUROTUS OSTREATUS" represents her bonafied work in the M.Sc II (semester- IV) of academic year 2019 -2020.

Dr. A. A. Raut. **Examiner** **Dr. N. R. Shaikh.**

Project Supervisor **Head, Department of Microbiology**

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO : 5043

EXAM NO :

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College Of Science, Karad

Department Of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss SNEHA SATISH SHETYE has carried out the required project work prescribed by the Shivaji University, Kolhapur in the Practical Course VIII: Project Work for M.Sc. Part II (Semester IV)

Microbiology Corse and her Project entitled "ANTAGONISTIC INTERACTIONS AMONG HALOBACTERIA DUE TO HALOCIN PRODUCTION" represents her work in the M.Sc. Part II (Semester IV) of the academic year 2019 – 2020.

V.N.Kumbhar

Miss. V. N. Kumbhar

Project supervisor

Dr. N. R. Shaikh

EXAMINER Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

ROLL NO :- 5045

EXAM NO :- 3238

Date: 22/09/2020.

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. SHINDE SACHIN ARUN** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his Project Work entitled as **"EFFECT OF LED LIGHT ON GROWTH OF BACTERIA"** represents his bonafide work in the M.Sc. II (Semester-IV) of the academic year 2019 -2020.

Dr. A.R. RAUT

Project Supervisor

Dr. N. R. Shaikh.

EXAMINER

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO :- 5045

EXAM NO :- 3238

Date: 22/09/2020.

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. SHINDE SACHIN ARUN** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his Project Work entitled as **"EFFECT OF LED LIGHT ON GROWTH OF BACTERIA"** represents his bonafide work in the M.Sc. II (Semester-IV) of the academic year 2019 -2020.

Dr. A.R. RAUT

Project Supervisor

Dr. N. R. Shaikh.

EXAMINER

Head of the Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

ROLL NO: 5046

EXAM NO: 3239

DATE :21/09/2020

Shri Shivaji Education Society , Karad

Board for Higher Education's

Yashwantrao Chavan College of Science , Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss. Sodage Anjali Anil has carried out the required project work prescribe by the Shivaji University, Kolhapur in Practical Course VIII : Project work for M.Sc . Part II (Semester IV) Microbiology course and her Project work entitled as " ISOLATION, CHARATERIZATION AND PRODUCTION OF PEROXIDASE FROM BACTERIA AND ITS APPLICATIONS IN PHENOL DEGRADATION AND DYE DECOLOURIZATION " represents her bonafide work in the M.Sc. II (Semester – IV) of the academic year 2019-2020.

Dr .N . R . Shaikh

Project Supervisor

EXAMINER

Dr. N .R. Shaikh

Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

Exam no:

Date:

Roll no:

Shri. Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. SUTAR DHANASHREE VINAYAK** has satisfactorily carried out the required project work prescribed by the **Shivaji University, Kolhapur** in PRACTICAL COURSE VIII: Project work for the M.Sc. part II (semester IV) Microbiology course and her PROJECT REPORT entitled **"PRODUCTION OF BIOCEMENT FROM UREOLOYTIC BACTERIA"** represents her bonafide work in M.Sc. part II (semester IV) of the academic year 2019-2020.

Dr. N. R. Shaikh

Project Guide and

Head, Department of

Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science *KARAD*

Exam No: 3243

Date: 22th Sept. 2020

Shri. Shivaji Education Society, Karad

Board For Higher Education's

Yashwantrao Chavan College of Science,Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss. Wadkar Aishwarya Arun has carried out the required project work prescribed by the Shivaji University Kolhapur in practical course VIII ;project work for M.Sc. part II [semester IV] and her project was entitled as "CHARACTERISATION OF ORANISM AND PRODUCTION ,APPLICATION Of EXOPOLYSACCARIDE BY HALOPHILIC BACTERIUM "represents her bonafide work in the M.Sc.II(Semester IV) of the academic year 2019-2020.

Dr. J. U. Patil
Project supervisor

Dr.N.R. Shaikh
Head of Department

Yashwantrao Chavan College of Science * KARAD *

HEAD
DEPARTMENT OF MICROBIOLOGY

SHRI SHIVAJI EDUCATION SOCIETY,KARAD

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, Miss. Autade Vishranti Sanjay have completed project work entitled **"Online Crime Reporting System"** For the partial fulfilment of the award of the degree **"Bachelor of Computer Science (Optional)" (B.Sc. III CS (Optional))** of Shivaji University, Kolhapur for the academic year 2019-2020.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date:- 3/03/2020.

Place :- Karad.

3/3/2020

Prof. S. J. Jadhav.
(Project Guide)

Examiner

Dr. B. P. Relekar.
(Head of Department)

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, Mr. Mane Ashish Bhaskar and Mr. Kachare Pratik Suhas have completed project work entitled **"Online Medicine System"** For the partial fulfilment of the award of the degree **"Bachelor of Computer Science (Optional)" (B.Sc. III CS (Optional))** of Shivaji University, Kolhapur for the academic year 2019-2020.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date:- 02/03/2020.

Place :- Karad.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

Prof. M. S. Jadhav.
(Project Guide)

Examiner

Dr. B. P. Relekar.
(Head Of Department)

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, Miss. Shinde Anuradha Adhikrao and Mr. Suryawanshi Suraj Sukhadev have completed project work entitled **"Medical Store Management System"** For the partial fulfilment of the award of the degree **"Bachelor of Computer Science (Optional)" (B.Sc. III CS (Optional))** of **Shivaji University, Kolhapur** for the academic year 2019-2020.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date:- 03/03/2020.

Place :- Karad.

03/03/2020

Prof. A. V. Nalawade.
(Project Guide)

Examiner

Dr. B. P. Relekar.
(Head of Department)

SHRI SHIVAJI EDUCATION SOCIETY,KARAD

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, Mr. Mohite Vikram Baban and Mr. Lad Aditya Sandeep have completed project work entitled **"Online Shopping"** For the partial fulfilment of the award of the degree **"Bachelor of Computer Science (Optional)" (B.Sc. III CS (Optional))** of **Shivaji University, Kolhapur** for the academic year 2019-2020.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date:- 03/03/2020.

Place :- Karad.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

3/3/2020

Prof. S. J. Jadhav.
(Project Guide)

Examiner

Dr. B. P. Relekar.
(Head of Department)

SHRI SHIVAJI EDUCATION SOCIETY KARAD

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, Mr. Kadam Sooraj Ananda have completed project work entitled "Online Advertisement System" For the partial fulfilment of the award of the degree **"Bachelor of Computer Science (Optional)" (B.Sc. III CS (Optional))** of Shivaji University, Kolhapur for the academic year 2019-2020.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date:- 03/03/2020.

Place :- Karad.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

Prof. N. V. Thorat.
(Project Guide)

Examiner

Dr. B. P. Relekar.
(Head of Department)

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, **GOPHANE SANDYARANI SAMBHAJI** and **DESHAMUKH INDRAJIT DATTATRAY** have completed project work entitled **"Attendance Portal"** for the partial fulfilment of the award of the degree **"Bachelor of Computer Science (Entire)"** of **Shivaji University, Kolhapur** for the academic year **2019-2020.**

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 04/03/2020
Place: Karad.

Prof. S. G. Padyal
(Project Guide)

Examiner

Dr. B. P. Relekar
(Head of Department)

SHRI SHIVAJI EDUCATION SOCIETY, KARAD

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, **PAWAR SUNIL BASU** and **GURAV VRUSHALI UTTAMRAO** have completed project work entitled **"Online Book Shop"** for the partial fulfilment of the award of the degree **"Bachelor of Computer Science (Entire)"** of **Shivaji University, Kolhapur** for the academic year **2019-2020.**

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 04/03/2020
Place: Karad.

Prof. A. G. Jirange
(Project Guide)

Examiner

Dr. B. P. Relekar
(Head of Department)

SHRI SHIVAJI EDUCATION SOCIETY, KARAD

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, **PATIL HARSHADA VASANT** and **SHEWALE DIPALI DADASO** have completed project work entitled **"Online Food order system"** for the partial fulfilment of the award of the degree **"Bachelor of Computer Science (Entire)"** of **Shivaji University, Kolhapur** for the academic year **2019-2020.**

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 04/03/2020
Place: Karad.

Prof. N. V. Thorat
(Project Guide)

Examiner

Dr. B. P. Relekar
(Head of Department)

SHRI SHIVAJI EDUCATION SOCIETY, KARAD

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, **TADAVI MAYUR CHHABU** and **GURAV RUSHIKESH RAMESH** have completed project work entitled **"Vaccination Reminder System"** for the partial fulfilment of the award of the degree **"Bachelor of Computer Science (Entire)"** of **Shivaji University, Kolhapur** for the academic year **2019-2020.**

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 04/03/2020
Place: Karad.

Prof. A. V. Nalawade
(Project Guide)

Examiner

Dr. B. P. Relekar
(Head of Department)

SHRI SHIVAJI EDUCATION SOCIETY, KARAD

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, **WAYKASKAR SAKSHI DHANANJAY** and **KHALATI PRIYANKA MAHADEV** have completed project work entitled **"Event Management System"** for the partial fulfilment of the award of the degree **"Bachelor of Computer Science (Entire)"** of **Shivaji University, Kolhapur** for the academic year **2019-2020.**

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 04/03/2020
Place: Karad.

Prof A. G. Jirange
(Project Guide)

Examiner

Dr. B. P. Relekar
(Head of Department)

Shri Shivaji Education Society, Karad
Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Electronics

CERTIFICATE

This is to certify that, the project work entitled "Development of Microcontroller Based Cold Storage Monitoring System" which is being submitted herewith as part of Lead College Activity of Shivaji University Kolhapur is the result of original project work conducted by,

Miss. Pathan Ayesha Asif *(Roll No: -3038)*

Miss. Patil Sonali Jaywant *(Roll No: -3039)*

under my supervision and guidance. The project written by us has not formed earlier the basis for the award of any degree or diploma or any other similar work.

Place – Karad

Date –

Shri. Mulla A.A.
(Project Guide)

Head of Department
Head
Department of Physics/Electronics

Principal
Principal
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ KARAD ★

Yashwantrao Chavan College of Science ★ Karad ★ ELECTRONICS

SHREE SHIVAJI EDUCATION SOCIETY'S ,KARAD

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE , KARAD

Department of zoology

CERTIFICATE

This is to certify that Mr. More Vishal Anil has completed the project on , "STUDY OF LUNG CAPACITY IN SELECTED TEACHERS AND STUDENTS FROM YASHWANTRAO CHAVAN COLLEGE OF SCIENCE ,KARAD " For fulfillment of practical work prescribed in Shivaji University Kolhapur Zoology B.Sc.III syllabus during the Year 2019-20.

Project guide

Examiner

Head dept. of Zoology

Yashwantrao Chavan Collage Of Science, Karad.

Yashwantrao Chavan College of Science ★ Karad ★ ZOOLOGY

CERTIFICATE

This is certify that,

Mr. / Miss – Bhise Gajanan Tanaji

Of B.sc.-III , Roll No.- 8102 Has actively participated in the project work held in month of February 2020 and successfully completed under the guidance of Miss. Chavan M.P.

Exam.Seat No. :

Signature of Guide

for

Head of Statistics Department

Signature of the Examiner

Yashwantrao Chavan College of Science STATISTICS ★ Karad ★

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

DEPARTMENT OF STATISTICS

PROJECT WORK (2019-2020)

CERTIFICATE

This is to certify that,

Shri./Smt./Miss Jadulokar A.R.

Roll no. 8106 Exam seat no. _____ has actively participated in the project work, held in month ofMarch-2020 and successfully completed it under the guidance of Miss. A. A. Rawate.

Signature of Guide Examiner Head of Department

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

CERTIFICATE

This is certify that,

Mr. / ~~Miss~~ - Bakale, N.B, Desai M.R., Deshmane S.H., Khot S.S., Parrar R.V., Shinde A.M.

Roll No. — has actively participated in the project work

held in month of February 2020, under the guidance of Miss. Mohite A.V.

Exam .Seat No. :

Signature of Guide

for. Rashmi

Head of the

Statistics Department

Signature of Examiner

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

Yashwantrao Chavan College of Science, Karad.



A

Project Report

On

"DETERMINATION OF GLUCOSE - D BY USING REFRACTOMETRY"

SUBMITTED TO

Department of Chemistry

During the Course of

Bachelor of Science in Chemistry

By

Miss. Patil Smita Sharad
Miss. Patil Sneha Bhauso
Mr. Patil Vishal Rangrao
Mr. Pawar Ajit Balasaheb
Miss. Pawar Dhanashri Hindurao

UNDER THE GUIDENCE OF

Miss. Thorat U. V. (M.Sc.)

Department of Chemistry
Yashwantrao Chavan College of Science, Karad.

Department of Chemistry
Yashwantrao Chavan College of Science, Karad.
(2019-2020)

Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

CERTIFICATE

This is to certify that

Miss. Patil Smita Sharad	*Roll No. 3531*
Miss. Patil Sneha Bhauso	*Roll No. 3532*
Mr. Patil Vishal Rangrao	*Roll No. 3536*
Mr. Pawar Ajit Balasaheb	*Roll No. 3538*
Miss. Pawar Dhanashri Hindurao	*Roll No. 3541*

have successfully completed the Project On

"Determination of Glucose - D by using Refractometry"

for the partial fulfillment for the award of the degree of bachelor of Science in Chemistry under my supervision as per rules and regulations of Yashwantrao Chavan College of Science, Karad affiliated to Shivaji University, Kolhapur during the academic year 2019-2020. This works present bonafied work of the students.

UVThorat

Miss. Thorat U. V.
Assistant Professor
Project Guide

Examiner

HOD
Department of Chemistry
Dr. S. H. Burugale
Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Place : Karad.

Date :

DEPARTMENT OF CHEMISTRY

DECLARATION

This is to certify that,

Miss. Patil Smita Sharad	*Roll No. 3531*
Miss. Patil Sneha Bhauso	*Roll No. 3532*
Mr. Patil Vishal Rangrao	*Roll No. 3536*
Mr. Pawar Ajit Balasaheb	*Roll No. 3538*
Miss. Pawar Dhanashri Hindurao	*Roll No. 3541*

have submitted the Project entitled "Determination of Glucose - D by using Refractometry" for the year 2019-2020. This project was carried out under my guidance and supervision.

UThorat

Miss. Thorat U. V. (M.Sc.)
Project Guide

Place : Karad.

Date :

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide Miss. Thorat U. V., Assistant Professor, Department of Chemistry, for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.

I also extend my sincere thanks to Dr. S. H. Burungale, Head of Department of Chemistry for providing the laboratory facilities.

My sincere thanks are due to Principal, Dr. S. B. Kengar for his constant encouragement.

I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this Project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this Project.

Name of Students

Miss. Patil Smita Sharad

Miss. Patil Sneha Bhauso

Mr. Patil Vishal Rangrao

Mr. Pawar Ajit Balasaheb

Miss. Pawar Dhanashri Hindurao

Place : Karad

Date :

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Introduction

The instrument used for determination for refractive index are called refract meter. The most common instrument used in abbe's refractometer. It's operation based on oritical angal of refraction being obtained in glass when the angle of incident in the liquid is almost 90^0.

The main part of refractometer are shos :

1) Mirror of refracted light from a frasted lamp or diffused sunlight into the instrument.
2) Prism box is in two prism box of flint glass (N=1 and more) are fixed in a wiged froms the prism can be pulled apart by opening the liquid whose refractive index is to be measured can be placed between two prism has one ground glass surface on which the lower liquid films is placed. It provides light incidient at all possible angles the appear prism has polished surface the whole of prism box can be rotated around horizontal axis in the vertical plane.

Theory :

When a ray of light passes from a rare to denser medium, it bends towards the normal at the interface. According to Snell's law of refraction. The refractive index of the liquids is given by ,

$$n = \frac{\text{Sin i}}{\text{Sin r}}$$

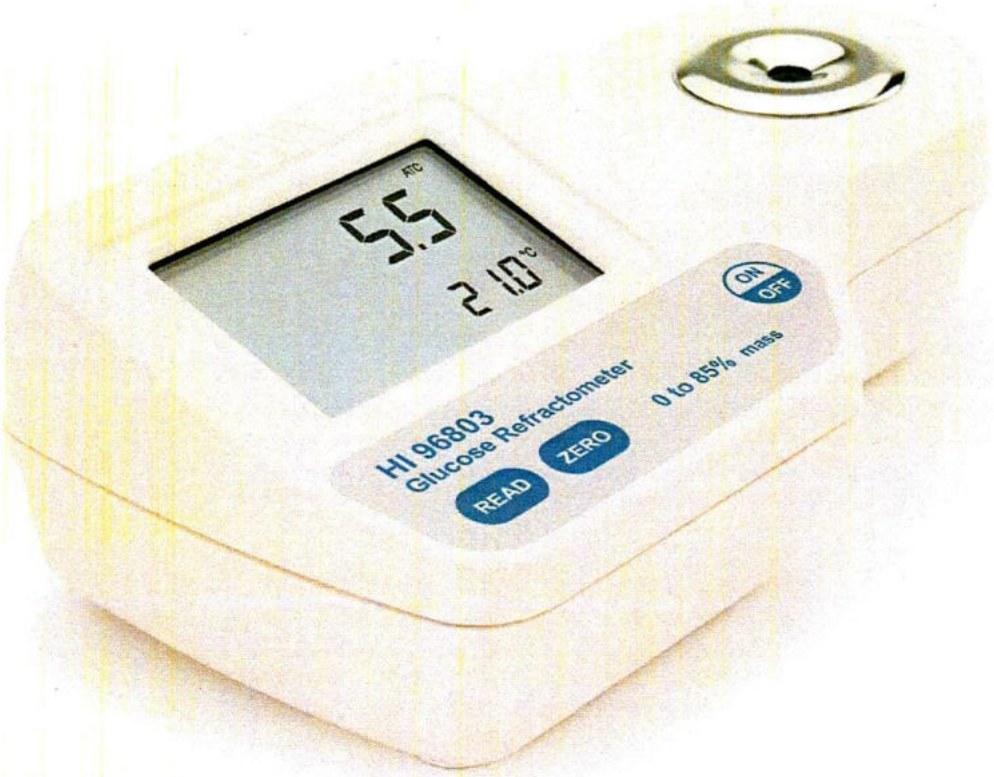
Refractometry follows the critical angle principle.

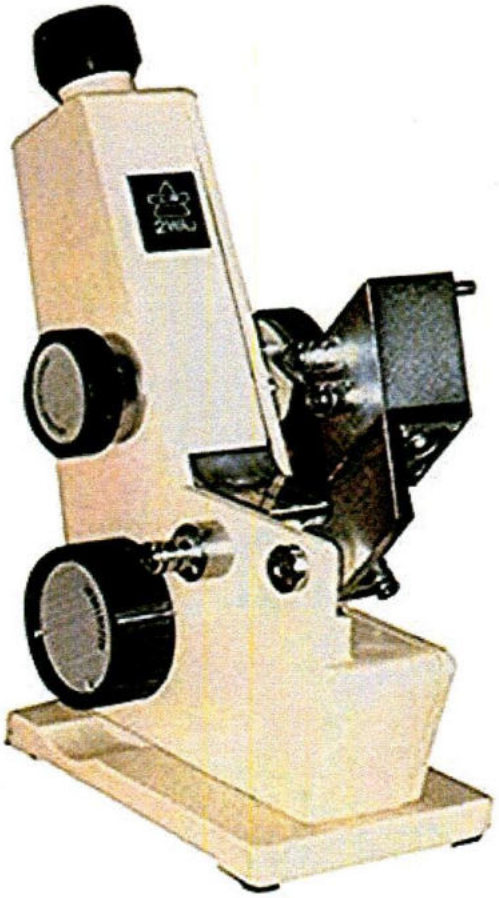
Critical Angle Principle :

When angle of incidence increases angle of refraction also increases and reaches to it is maximum value. When angle of incidence become 90^0 beyond the critical angle there will be completed darkness observed by means of an eyepiece refractive index depend on temperature but specific refractiveity of the substance.

Calibration of Refractometry :

Refractor can convinctly be calibrated by making of purified liquids such as water (n^{20} = D = 1.330) toluene (n^{20} D = 1.4969) and methyl cyclonexone (n^{20} = 1.4231). The national Bureals of standard supplies both lene and methyl cyclonexene as crertified samples with five decimal indicate at 20^0, 25^0 and 30^0 C and for each of seven wavelengths.


55
21.0
ON
OFF
HI 96803
Glucose Refractometer
0 to 85% mass
ZERO
READ



Determination of Glucose - D by using Refractometry

Appratus :

Refractometer, Glucose solution D-Glucose Acetone, Dropper etc.

Chemicals :

Glucose Solution, Acetone, Distilled water.

Procedure :

i) Preparation of solution of different concentrations. Determination of refractive index of the different solutions having different concentration. This solution is formed by the following process.

Take 62.50 gms of glucose and dissolve it into 250 ml distilled water by using volumetric flask. This solution is used to prepare different concentration of solution.

Take 40 ml., 30 ml., 20 ml. and 10 ml Solution of glucose and diluted against 50 ml. distilled water by (50 ml.) volumetric flask. This solution is used to determine the angle of rotation. similarly the given D. Glucose powder is taken in amount of 20 gms and diluted it

then take 25 ml of This D.glucose solution to 50 ml. diluted to from 20% of solution.

Determination of R.I. of different concentration and whose refractive index is to be measured can be placed between the two prism i.e. lower prism has one ground glass surface on which the liquid from is placed and observed the reading on the telescope and record the readings on the observation Table.

Chemical Reaction:

$$\underset{\text{Sucrose}}{C_{12}H_{22}O_{11}} + H_2O \xrightarrow{H^+} \underset{\text{Glucose}}{C_6H_{12}O_6} + \underset{\text{Fructose}}{C_6H_{12}O}$$

Observation Table :

	Volume 0.5 taken to prepare 50 ml. solution	Refractive index
Flask No. 1	Distilled Water	1.333
Flask No. 2	20 %	1.355
Flask No. 3	15 %	1.350
Flask No. 4	10 %	1.344
Flask No. 5	5 %	1.339
Flask No. 6	Unknown Solution	1.354

Calculations :

% of unknown sample from graph.

% of D- glucose = 19.50 x 100 / 20

% of D- Glucose = 1950/20

= 97.50 %

= 97.50 % of Glucose

Application of refractometry :

Refractometry has been employed for qualitative and quantitative analysis as well as for structural investigations.

Qualitative Analysis :

The identification of pure compounds can easily be carried out by combining pricise refraction index and dispersion data with other information, the specific data are of great importance when correlated with MP and BP elements analysis and spectroscopic evidence. Since the sensitivity of refractive index and dispersion depends upon the purity of sample in qualitative work considerable care must be taken in sample purification.

Dispersion measurement have also been applied in qualitative analysis for probable example important information regarding the probable prescience or absence of certain functional groups can be obtained by using Abbe refractometer.

Quantitative Analysis : for mixture of organic liquids linearity is more often observed when volume present in employed. It is intering tonote that

Pressure :

Refractive index of a substance increase with pressure because of accompanying increase in density the effect is more pronounced in gasses then in liquids for solids then effected is smaller then gasses and liquids.

Thus the vibration in atmospheric pressure is only important for precise work with gasses and form the more exact work with liquids and solids.

Optical Evaluations :

When a compound contains two or more double bonds in conjugate position such as -CH = CH - CH = Ch - the molecular refractivity has been found to be greater then that calculated this phenomenon is called optical exalation.

Optical exaltation also occurce if carbonyl group is present along with double or triple bond the observed value of molar refractivity for intense of Phorone is 45, 39 while the calculated value is $(CH_2)_2$ C= CH- CO - CH = C $(CH_3)_2$

9 x 2.42 + 14 x 1.10 +2 x 1.73 + 1 x 2.21 = 42.85

Thus optical exalation = 45.3 g - 42.85

= 2.54

There will be no optical exaltation, when there are no conjugated double bonds. e.g. the observed value of molequalar refractivity for di alkyl i.e.

CH_2 = CH - CH - CH_3 - CH = CH_2 is 28.77

While the calculated value is 29.04 both the values are nearly clouser to each other.

In quantitative analysis linearly is note that in not a requirement because a suitable calibration curve can always prepared.

The determination of concentration of aqsugar solution is the most important quantitative application of refradometry most of the sugar have about the same effect on the refractive index of an aqueous solution the procedure thus gives measure of total carbohydrates concentration.

Similarly the concentration of sulphur in unvalucansed rubber can also be determined by refractometry.

The evaluation of apparatus and method for separation such as distillation odsarption chromatography diffusion and extraction are another important application of refractometry.

Result :

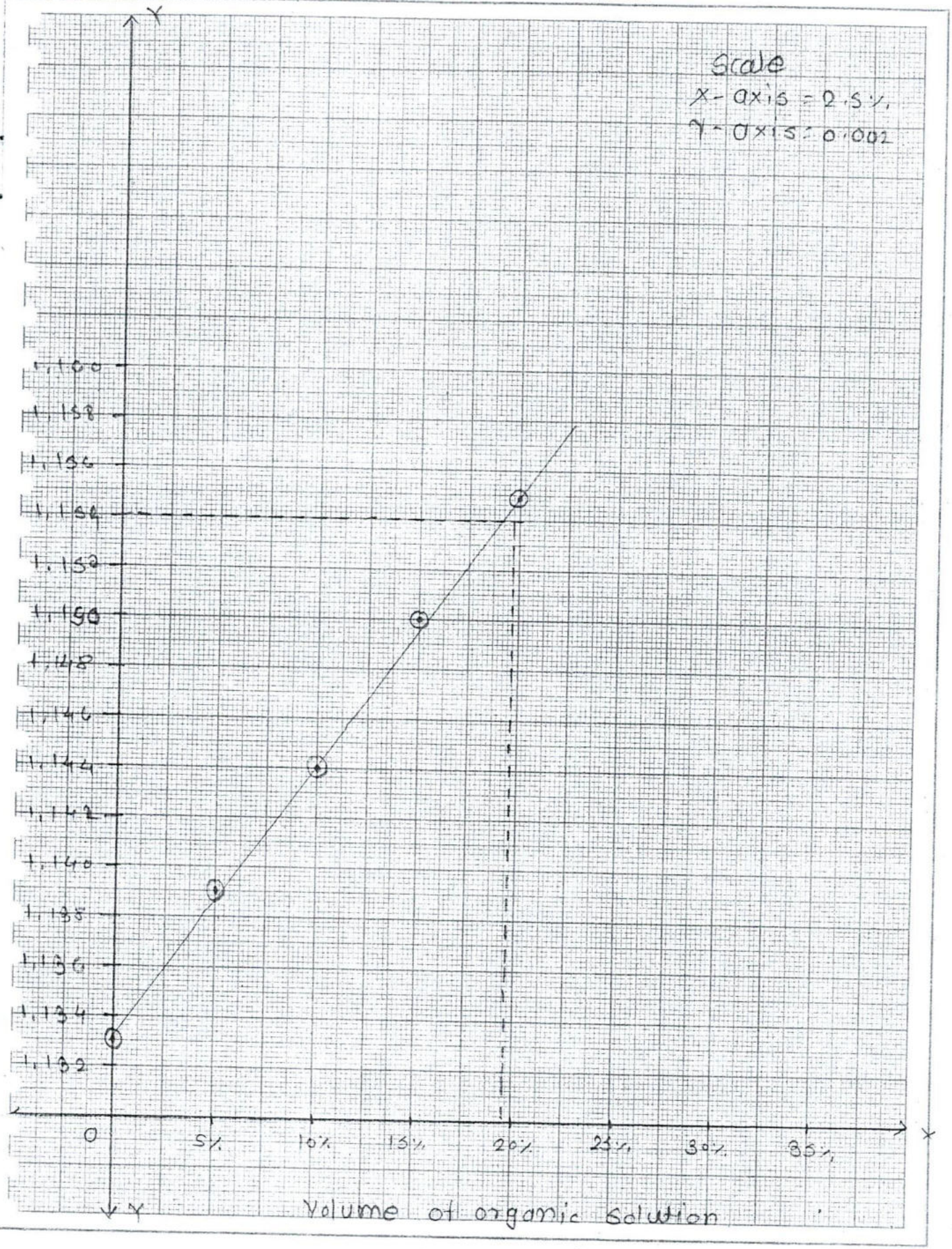
Percentage of Glucose = 97.50 %

Refractometry

Name :
Exp No. :
Date :

Class :
Scale on X axis :
Y axis :

Roll :
Batch :
Graph of :



Conclusion :

By experimental study we can say that the glucose is optically active. It rotates the plane polarised light.

To comparing with different concentration of glucose solution. To D-glucose with different concentration of glucose solution to D-Glucose solution it has found that in D-Glucose 98.25 % of pure Glucose.

References :

1) Physical instrumental chemistry by Donel.

2) Physical chemistry by Khosla

3) Instrumental method of Chemical Analsysis.

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



A

PROJECT REPORT ON

"Estimation of Saponification Value Of an Oil"

A Project Report submitted for partial fulfillment of the award for degree of

Bachelor of ScienceIn Chemistry

By

Mr. MoreVikas Narayan
Mr .Mulla Anis Barkatali
Miss.Nalawade Komal Satish
Mr.Nurule Suchit Suresh
Mr .NIkam Nikhil Narayan

Under the guidance of

Miss.Bhosale M.B.(M.Sc)
Department of Chemistry
Yaswantraochavan college of science Karad.

Department Of Chemistry

YaswantraoChavancollege of science Karad. (2019-2020)

YaswantraoChavan College of Science,Karad.

Department of Chemistry

CERTIFICATE

This is to certify that, have

Mr. More Vikas Narayan(3495)
Mr .Mulla Anis Barkatali (3498)
Miss. Nalawade Komal Satish (3502)
Mr.Nurule Suchit Suresh (3504)
Mr .NIkam Nikhil Narayan(3506)

successfully completed the project on

"Estimation of Saponification Value Of an Oil"

For the partial fulfillment for the Bachelor of Science as per rule on regulation of YashwantraoChavan College Karadaffiliated to Shivaji University, Kolhapurduring academic year 2019-2020.This work present confided work of the student under my guidance and satisfactory carried out and completed the project work for the degree of B.Sc in Chemistry and presently submitted the project entitled.

Miss.M.B. Bhosle
Project Guide
Department of Chemistry

Examiner

Dr. S.H. Burungle
H.O.D.
Department of Chemistry

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

DECLARATION

We undersigned hereby declare that the project on "Estimation of Saponification Value Of an Oil" is completed under the guidance of Miss . BhosaleM.B. project work is based on the data which is collected by us. We declare that is our original work.

Yours faithfully,

Mr. More Vikas Narayan
Mr . Mulla Anis Barkatali
Miss. Nalawade Komal Satish
Mr. Narule Suchit Suresh
Mr .Nikam Nikhil Narayan

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Miss. Bhosale M.B.

Project Guide

Date:- / /2020

Place: Karad

ACKNOWLEDGEMENT

This project is obviously not only result of my work done but also many personalities have been directly involve and without whom this project repot completion would not have been possible.

It gives us a great pleasure to record our gratitude to project guide Miss. Bhosale M.B. for expert guidance, contractive criticism through provoking discussion and continuous inspiration throughout the course of project work.

We are also thankful to The Principle ,YashwantraoChavan College of science,Karadfor providing us chemistry laboratory for experimental work and needed support for this project.

Lastly We would like to thanks to all teaching staff of chemistry department for their kind co-operation and help. I also thanks to all our friends' their good will to completed this project.

Mr. MoreVikas Narayan
Mr .Mulla Anis Barkatali
Miss. Nalawade Komal Satish
Mr. Nurule Suchit Suresh
Mr .NIkam Nikhil Narayan

Date:- / /2020

Place:Karad

Shivaji Shikshan Sanstha's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



A

Project Report

On,

"Estimation Of Lactose"

A Project Report Submitted For Partial Fulfillment Of The Award For The Degree Of The

Bachelor Of Science

In

Chemistry

By

Mr. Salunkhe Amol Dilip

Miss. Salunkhe Ankita Vijay

Miss. Sankpal Pranita Dinkar

Mr. Sathe Nayan Manikrao

UNDER THE GUIDENCE OF

Dr.Burungale S.H.

Professor

Depatment Of Chemistry,

Yashwantrao Chavan College of Science, Karad.

Department Of Chemistry

(Year 2019-2020)

Shivaji Shikshan Sancta's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF CHEMISTRY

CERTIFICATE

This is to certify that,

Mr. Salunkhe Amol Dilip
Miss. Salunkhe Ankita Vijay
Miss. Sankpal Pranita Dinkar
Mr. Sathe Nayan Manikrao

Have successful completed the project on

"Estimation Of Lactose"

For the partial fulfillment of Bachelor of Science In Chemistry under my supervision as per rules and regulation of Y.C.College, Karad affiliated to shivaji university, Kolhapur during the academic year 2019-2020. This work presents bonafied wok of the student under my guidance and satisfactory carried out and completed the project work for the degree of B.sc. in Chemistry.

Place : Karad

Date: / /

Dr.Burungale S.H
Professor
Department of Chemistry

Examiner

Head
Department of Chemistry

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

A

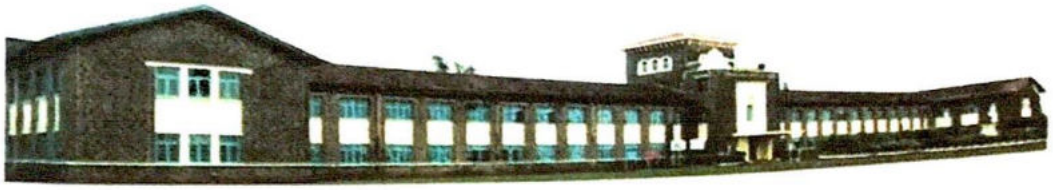
Project report

On

"Analysis of Honey"

Submitted to

Department of Chemistry,



Yashwantrao Chavan College Of Science, Karad.

During the course of

Bachelor of Science in

Chemistry

By

Sr.No.	Students Name	Roll No.
1.	Kadam Rohini Rajan.	3438
2.	Kadam Shweta Shankar.	3441
3.	Kadam Snehal Ramesh.	3442
4.	Kadam Snehal Suhas.	3443
5.	Kadam Supriya Rajendra.	3445

UNDER THE GUIDANCE OF

Miss.B.H.Jadhav

Assistant Professor

Dept. of Chemistry

Yashwantrao Chavan College Of Science, Karad.

(Year 2019-20)

Department of Chemistry

CERTIFICATE

This is to certify that,

Sr.No.	Students Name
1	Kadam Rohini Rajan.
2	Kadam Shweta Shankar.
3	Kadam Snehal Ramesh.
4	Kadam Snehal Suhas.
5	Kadam Supriya Rajendra.

have submitted the project entitled **"Analysis of Honey"** for the year **2019-20**.this project is carried out under my guidance and supervision. With the best my Knowledge this original work and submitted for the degree of B.Sc.III Chemistry of Shivaji University Kolhapur.

24/02/2020

Project guide

Head

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Department of Chemistry

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

External Examiners

Yashwantrao Chavan College of Science, Karad.



A

Project Report

On

"ANALYSIS OF SOIL QUALITY PARAMETERS"

SUBMITTED TO

Department of Chemistry

During the Course of

Bachelor of Science in Chemistry

By

Miss. Patil Mayuri Mohan
Miss. Patil Komal Jagannath
Miss. Patil Pooja Mahadev
Miss. Patil Amruta Dhankumar
Miss. Patil Shivani Chandrakant

UNDER THE GUIDENCE OF

Miss. Rainak P. N.
Department of Chemistry
Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

Yashwantrao Chavan College of Science, Karad.

(2019-2020)

Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

CERTIFICATE

This is to certify that

Miss. Patil Mayuri Mohan	*Roll No. 3519*
Miss. Patil Komal Jagannath	*Roll No. 3517*
Miss. Patil Pooja Mahadev	*Roll No. 3522*
Miss. Patil Amruta Dhankumar	*Roll No. 3514*
Miss. Patil Shivani Chandrakant	*Roll No. 3529*

have successfully completed the Project On

"Analysis of Soil Quality Parameters"

for the partial fulfillment for the award of the degree of bachelor of Science in Chemistry under my supervision as per rules and regulations of Yashwantrao Chavan College of Science, Karad affiliated to Shivaji University, Kolhapur during the academic year 2019-2020. This works present bonafied work of the students.

Rainak

Miss. Rainak P. N.
Project Guide

Examiner

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

HOD
Department of Chemistry
Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Place : Karad.

Date :

DEPARTMENT OF CHEMISTRY

DECLARATION

This is to certify that,

Miss. Patil Mayuri Mohan	*Roll No. 3519*
Miss. Patil Komal Jagannath	*Roll No. 3517*
Miss. Patil Pooja Mahadev	*Roll No. 3522*
Miss. Patil Amruta Dhankumar	*Roll No. 3514*
Miss. Patil Shivani Chandrakant	*Roll No. 3529*

have submitted the Project entitled "Analysis of Soil Quality Parameters" for the year 2019-2020. This project was carried out under my guidance and supervision.

Rainak

Miss. Rainak P. N.

Project Guide

Place : Karad.

Date :

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD



A

Project Report

On

" Manufacture of soaps"

SUBMITTED TO

Department of chemistry

During the course of

Bachelor of science in chemistry

By

Miss. Patil Nalini Jaywant

Miss.Patil Nikita Sanjay

Miss.Patil Rajashri Jagannath

Miss. Patil Sharvari Pramod

Miss Patil Shweta Subhash

Under The Guidance of

Miss . Rainak. P.N

Department of chemistry

Yashwantrao chavan college of science, karad

Department of chemistry

Yashwantrao chavan college of science, karad

(2019-2020)

Yashwantrao chavan college of science , karad

Department Of Chemistry

CERTIFICATE

This is to certify that

Miss . Patil Nalini Jaywant	**Roll No. 3520**
Miss. Patil Nikita Sanjay	**Roll No. 3521**
Miss. Patil Rajashri Jagannath	**Roll No. 3525**
Miss. Patil Sharvari Pramod	**Roll No. 3528**
Miss . Patil Shweta Subhash	**Roll No. 3530**

have submitted

the project entitled "**Manufacture of soaps**" for the year 2019-20 .this project is carried out under my guidance and supervision . With the best my Knowledge this original work and submitted for the degree of B.Sc.III Chemistry of shivaji university Kolhapur .This works present bonafied work of student .

Rainak

Miss. P.N.Rainak

External Examiners

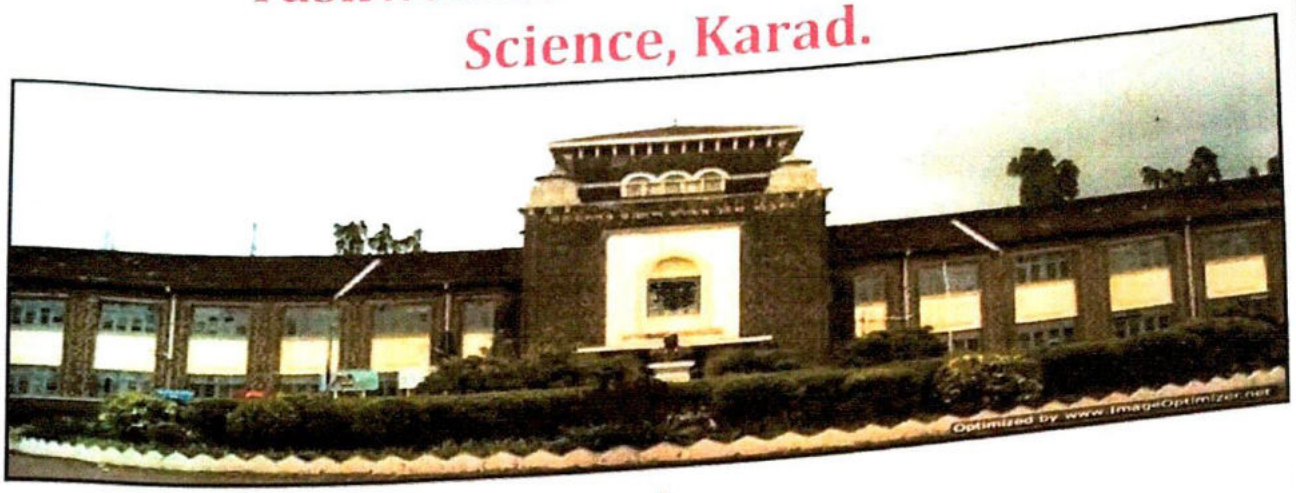
Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Place: Karad

Date :

Yashwantrao Chavan College of Science, Karad.



A

Project Report

On

"pH and Alkalinity of River Water"

SUBMITTED TO

Department of Chemistry

During the Course of

Bachelor of Science in Chemistry

By

Mr. Dhavale Omkar Umesh
Mr. Dole Ashutosh Dattatray
Mr. Dubal Akshay Anandrao
Mr. Gaikwad Ajit Shankar

UNDER THE GUIDENCE OF

Miss. Jadhav P. Y.

Department of Chemistry
Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

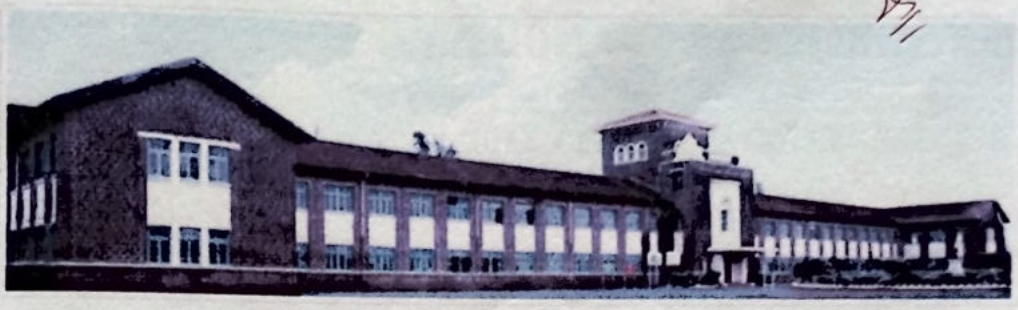
Yashwantrao Chavan College of Science, Karad.

(2019-2020)

G-7

Shivaji Shikshan Sanstha's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



Environmental Studies

A

Project Report

On,

"Solid Waste Management In Karad City"

B. Sc II

2019-2020

Submitted by,

Sr. No.	Name of Student	Roll no.	Exam no
1	*Miss. Pawar Apeksha Arun*	2142	23773
2	*Miss. Thorat Varsha Sudam*	2156	23615
3	*Miss. Thorat Pranali Vitthal*	2154	23695
4	*Miss. Shewale Rutuja Subhash*	2149	23726
5	*Miss. Surve Shardha Satish*	2150	23614

Under guidance of,

Patil P.A (M.sc Bed. BJc)

Exam Seat No. -

Date: 27/02/2020

Roll No.- 2142, 2156, 2154, 2149, 2150

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ..Pawar...Apeksha...Arun.....

..Thorat...Varsha....Sudam.....

..Thorat...Pranali....Vitthal.....

..Shewale...rutuja...subhash.....

..Surve...shradha...Satish.....

of B. Sc. II Environmental Studies have compicted the Environmental project satisfactorily on "....Solid..waste..managment...in..Karad..city....." *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2019-20.*

Co-ordinator

Head of Dept. (Incharge)

Head
Department of Pollution
Yashwantrao Chavan College of
Science, Karad

Principal

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE KARAD



SHIVAJI UNIVERSITY ,KOLHAPUR

BCS—II

2019–2020

A project report on:

"TO STUDY THE EFFECTS OF DEFORESTATION"

Submitted By:

Sr.no	Name of Student	Roll No	Exam Seat No
1	Jadhav Hrishikesh Anil	9224	1507
2	Tavate Sushant Uttam	9278	1513
3	More Ravikumar Tanaji	9251	1512
4	Satpute Rohan Rajendra	9270	1478
5	Karande Shantanu Shankar	9236	1495

Under the Guidance of,

Mrs. P. A. Patil (Msc B.Ed B.JC)

Exam Seat No. -

Date: 9-3-2020

Roll No.- 9224, 9278, 9251, 9270, 9236

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. Jadhav Hrishikesh Anil
Tavate Sushant Uttam
More Ravikumar Tanaji
Satpute Rohan Rajendra
Karande Shantanu shankar

of B. C. S II Environmental Studies have completed the Environmental project satisfactorily on "To study the effects of deforestation ... *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2019-20.*

Co-ordinator

Head of Dept. (I/c)

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

Principal

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

Yashwantrao Chavan College Of Science, Karad.



Under Shivaji University,Kolhapur

B.Sc-II

2019-2020

Environmental Studies

A Project on

"Study Of Awareness and Human Rights"

Submitted By

S.No	Students Name	Roll.No
1	Kachare Rutuja Vasant	2047
2	Karande Sunita Dnyandev	2048
3	Koli Anjali Arjun	2049
4	Patil Mayuri Shivaji	2052
5	Mulani Asma Kabil	2050

23780
23781
23782
23784

Under the Guidance

of

Mrs.Patil P.A.(M.Sc.B.Ed.B.JC)

Exam Seat No. -

Date: 27/02/2020

Roll No.-

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ..kachare....Rutuja...Vasant.....

...karande...Sunita...Dnyandev.....

....kali...Antali...Arjun.....

....pati...Mayuri...Shivaji.....

....Mulani...Asma...kabil.....

of B. Sc. II Environmental Studies have completed the Environmental project satisfactorily on "....Study...of...Awareness....and...Human...Rights....." *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2019-20.*

Co-ordinator

Head of Dept. (Incharge)

Head
Department of Pollution
Yashwantrao Chavan College of
Science, Karad

Principal

Yashwantrao Chavan College of Science
POLLUTION

G-82

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, VIDYANAGAR KARAD



UNDER SHIVAJI UNIVERSITY, KOLHAPUR

Environmental Studies

B. Sc. II
2019-2020

27

A
PROJECT
ON

"Study of impact of Global Warming on environment"

Submitted by,

SR NO	Name of the Student	Roll No	Exam Seat No	Sign
1.	Mulla Karina Jahangir	2616	23855	
2.	Nalawade Pratik Namdev	2617		
3.	NarutePranitBalasaheb	2618	23670	
4.	NikamShubhamDadaso	2619		
5.	Mohite Yogeshwar Baban	2614		

Under Guidance of,

Mrs. Patil P.A.(M.Sc. B.Ed.BJc)

Exam Seat No. - 26 Date: 03/08/2020

Roll No.- 2614, 2616, 2617, 2618, 2619

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. Mohite Yogeshwar Baban

Mulla Kamina Jahangir

Nalawade pratik Bhimdev

Narute pranit Balasaheb

Nikam Shubham Dadaso

of B. Sc. II Environmental Studies have completed the Environmental project satisfactorily on "study of impact of Global warming on environment" *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2019-20.*

Co-ordinator

Head of Dept. (Includes Asst.)

Department of Pollution
Yashwantrao Chavan College of Science, Karad

Principal

Yashwantrao Chavan College of Science * Karad * POLLUTION

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD



SHIVAJI UNIVERSITY, KOLHAPUR

BCS—II

2019—2020

A project report on:

"TO STUDY THE EFFECTS OF BRICK INDUSTRY"

Submitted By:

Sr.no	Name of Student	Roll No	Exam Seat No
1	Shedage Rohit Nivas	9271	1515
2	Patel Deepesh Naresh	9258	1517
3	Pawar Pavan Bhaskar	9266	1520
4	Rajput Prathmesh Mahendrasingh	9268	1506
5	Kokare Abhishek Uttam	9239	1521

Under the Guidance of,

Mrs. P. A. Patil (Msc B.Ed B.JC)

Exam Seat No. -

Date: 9/3/2020

Roll No.- 9271, 9258, 9266, 9268, 9239

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / ~~Miss.~~ Shedage Rohit Nivas

Patel Deepesh Naresh

Pawar Pavan Bhaskar

Rajput Prathmesh Mahendrasingh

Kokare Abhishek Uttam

of B. C. S II Environmental Studies have completed the Environmental project satisfactorily on " To Study the effect of Brick Industry *" as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2019-20.*

Co-ordinator

Head of Dept. (Incharge)

Department of Pollution
Yashwantrao Chavan College of Science, Karad

Principal

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

Shivaji Shikshan Sanstha's

Yashwantrao Chavan College Of Science, Karad.



Under Shivaji University,Kolhapur

BCS-II

2019-2020

Environmental Studies

A Project on

"River Aquatic Plants"

Submitted By

Sr.No	Students Name	Roll.No	Exam No
1	Gadhave Deepak Shankar.	9215	1699
2	Koli Vinayak Nilkanth.	9242	1700
3	Kulkarni Aditya Govind.	9243	1697
4	Surve Madhusudan Tanaji.	9276	1698
5	Thombare Prathamesh Vijaykumar.	9279	1693

Under the Guidance

of

Mrs.Patil P.A.(M.Sc.B.ed.BJC)

Exam Seat No. -

Date: 09/09/2020

Roll No.- 9215, 9242, 9243, 9276, 9279

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. Gadhvae Deepak shankar
koli vinayak Nilkanth
Kulkarni Aditya Govind
Surve Madhusudan Tanaji
Thombare Prathmesh vijaykumar

of B. C. S II Environmental Studies have completed the Environmental project satisfactorily on "River Aquatic plants" *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2019-20.*

Co-ordinator

Head of Dept. (Incharge)

Principal

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

24 G04

Yashwantrao Chavan College Of Science,Karad.



SHIVAJI UNIVERSITY, KOHLAPUR.

Environmental Studies

BCS-II

2019 -2020

A

Project Report

On

" STUDY OF SOLAR ENERGY SYSTEM"

Submitted By ,

Sr No.	Name of students	Roll No.	Exam seat No.
1.	Shreya Satish Shinde	9274	1519
2.	Mariya Israr Inamdar	9220	1538
3.	Swapnali Sanjay Patil	9265	1520
4.	Prajakta Raghunath Thorat	9280	1531
5.	Damini Raghunath potekar	9267	1524

Under Guidance of ,

Mrs. Patil P. A. (M.Sc. B.Ed.BJc)

Exam Seat No. -

Date: 07/03/2020

Roll No.-

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. 1] Shinde Shreya Satish

2] Inamdar Mariya Israr

3] Patil Swapnali Sanjay

4] Thorat Prajakta Raghunath

5] Potekar Damini Raghunath

of B. C. S II Environmental Studies have completed the Environmental project satisfactorily on "Study Of Solar Energy System" *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2019-20.*

Co-ordinator

Head of Dept. (CIncharge)

Principal

Department of Pollution
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science * Karad *
POLLUTION
2

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE KARAD



SHIVAJI UNIVERSITY ,KOLHAPUR

BCS—II

2019—2020

A project report on:

"TO STUDY THE EFFECTS OF MINING "

Submitted By:

Sr.no	Name of Student	Roll No	Exam Seat No
1	Rushikesh Suresh Mohite	9250	1502
2	Aniket Pramod Namdas	9254	1503
3	Rohit Rajendra Kulkarni	9244	1480
4	Kiran Uttam Shelake	9272	1486
5	Viraj Suryakant Bhingardeve	9204	1474

Under the Guidance of,

Mrs. P. A. Patil (MscB.Ed B.JC)

Exam Seat No. -

Date: 9/3/2020

Roll No.- 9250, 9254, 9244, 9272, 9204.

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. .....Rushikesh Suresh Mohite.....

.....Aniket Pramod Namdas.....

.....Rohit Rajendra Kulkarni.....

.....Kiran Uttam Shelake.....

.....Viraj Surjakant Bhingardeve.....

of B. C. S II Environmental Studies have completed the Environmental project satisfactorily on "....To Study of Effects of mining....." *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2019-20.*

Co-ordinator

Head of Dept. (Incharge)

Department of Pollution
Yashwantrao Chavan College of Science, Karad

Principal

Yashwantrao Chavan College of Science * Karad * POLLUTION

29 G-02

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

VIDYANAGAR,KARAD.

UNDER SHIVAJI UNIVERSITY,KOLHAPUR.

ENVIRONMENTAL PROJECT

BCS II

2019-2020



"FOREST FIRE DISASTER MANAGEMENT"

BY

NAME OF THE STUDENT	ROLL NO.	EXAM SEAT NO.
1.Aragade Apeksha Gokuldas	9201	1533
2.Avate Priti Namdev	9202	1487
3.Disale Namrata Nishikant	9214	1536
4.Jadhav Akanksha Sarjerao	9221	1539
5.Jagtap Vaishnavi Rakesh	9229	1542

UNDER THE GUIDANCE OF

MRS.P.A.PATIL(M.SC B.EDB.JC)

Exam Seat No. -

Date: 07/03/2020

Roll No.- 9201, 9202, 9214, 9221, 9229

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ...Aragade....Apeksha...Gokuldas.....

..Avate.....Priti.....Namdev.....

..Disale....Namrata.....Nishikant.....

..Jadhav....Akanksha.....Sanjeeraо.....

..Jagtap....Vaishnavi.....Rakesh.....

of B. C. S II Environmental Studies have completed the Environmental project satisfactorily on "..Study..of...forest...fire..disaster....management....." *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2019-20.*

Co-ordinator

Head of Dept. (Incharge)

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

Principal

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

Yashwantrao Chavan College Of Science,Karad.



SHIVAJI UNIVERSITY ,KOHLAPUR.

BCS-II

2019-2020

Environmental Studies

A

Project Report

On

" STUDY OF BIODIVERSITY OF KOYANA WILD LIFE SANCTUARY"

Submitted By,

Sr.no	Name Of Student	Roll No	Exam Seat No
1)	Deshmukh Sarika Hanmant	9212	1525
2)	Gholap Poonam Mahendra	9218	1537
3)	Jadhav Kajal Anil	9222	1540
4)	Yadav Shweta Shivaji	9286	1550
5)	Shinde Pratik Prakash	9273	1483

Under Guidance of,

Mrs. Patil P. A. (M.Sc. B.ed.BJC)

Exam Seat No. -

Date: 07/02/2020

Roll No.- 9212, 9218, 9222, 9286, 9273

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Accredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. 1). Deshmukh Sarika Hanmant

2). Gholap Poonam Mahendra

3). Jadhav Kajal Anil

4). Yadav Shweta Shivaji

5). Shinde Pratik Prakash

of B. Sc. II Environmental Studies have completed the Environmental project satisfactorily on " Study of Biodiversity of Koyana wild Life Sanctuary *" as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2019-20.*

Co-ordinator

Head of Dept. (Incharge)

Head
Department of Pollution
Yashwantrao Chavan College of
Science, Karad

Principal

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Attar Siddika Arif** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and characterization of actinomycetes antagonistic to pathogenic vibrio supp.from nearshore marine sediments" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SAShikalgar

Miss. S.A. Shikalagar
PROJECT SUPERVISOR

SAShikalgar

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad *
BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Bhagawat Shreya Pramod** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Effect of Monosodium Glutamate on Rat" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SAShikalgar

Miss. S.A. Shikalagar
PROJECT SUPERVISOR

SAShikalgar

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Sayli Shashikant Disale** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antibacterial Activity and Phytochemical Analysis of *Tridax Procumbens*" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SAShikalgar

Miss. S.A. Shikalagar
PROJECT SUPERVISOR

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EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Dhotre Pallavi vilas** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and characterization of lactobacillus spp. From curd samples and its pharmaceutical application in probiotic chocolate" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SAShikalgar

Miss. S.A. Shikalagar
PROJECT SUPERVISOR

SAShikalgar

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Poonam Ashok Dodke** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Keratin Production and it's application's" presents her bonafide work in B.Sc- III of the academic year 2020-2021

S.A.Shikalgar.

Miss. S.A. Shikalagar
PROJECT SUPERVISOR

S.A.Shikalgar.

EXAMINAR

S.A.Shikalgar.

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Ghadage Harshada Hanmant** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antibacterial and antifungal activites from leaf extracts of Cassia fistula l: An ethnomedicinal plant " presents her bonafide work in B.Sc- III of the academic year 2020-2021

S.A.Shikalgar.

Miss. S.A. Shikalagar
PROJECT SUPERVISOR

S.A.Shikalgar.

EXAMINAR

S.A.Shikalgar.

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Yogesh Dadaso Jadhav** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Study of generation of bioelectricity from buffalo dungusingmicrobial fuel cell" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SAShikalgar

Miss. S.A. Shikalagar
PROJECT SUPERVISOR

SAShikalgar

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Jagtap Nishtha Dattaray** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and characterization of pectinase producing bacteria from the intestine of silkworm (*bombyx mori)*" presents her bonafide work in B.Sc- III of the academic year 2020-2021

S.A.Shikalgar

Miss. S.A. Shikalagar
PROJECT SUPERVISOR

S.A.Shikalgar

EXAMINAR

S.A.Shikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Kale Vishakha Vishvas** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antiviral activity of medicinal plant of nilgiris" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SAShikalgar

Miss. S.A. Shikalagar
PROJECT SUPERVISOR

SAShikalgar

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss Kanase Prajkta Dattatrey** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Effect of tobacco consumption resulting in mitochondrial number change in oral mucosal cells" presents her bonafide work in B.Sc- III of the academic year 2020-2021

A.K.Randive

Mrs. A.K. Randive
PROJECT SUPERVISOR

S.A.Shikalgar

EXAMINAR

S.A.Shikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★
BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss Ketaki Anant Kulkarni** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Fungal biofilms : inside out " presents her bonafide work in B.Sc- III of the academic year 2020-2021

AKRandive

Mrs. A.K. Randive
PROJECT SUPERVISOR

SASHikalgar

EXAMINAR

SASHikalgar

CO-ORDINATOR
Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Momin Reena Rashid** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antimicrobial efficacy of tulsi leaf (ocimum sanctum) extract on periodontal pathogens" presents her bonafide work in B.Sc- III of the academic year 2020-2021

AKRandive

Mrs. A.K. Randive
PROJECT SUPERVISOR

SASHIKALGARE

EXAMINAR

SASHIKALGARE

CO-ORDINATOR
Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★
BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Patil Mrunalini Rajendra** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Phytochemistry of medicinal plants " presents her bonafide work in B.Sc- III of the academic year 2020-2021

AKRandive

Mrs. A.K. Randive
PROJECT SUPERVISOR

SABhikalgere

EXAMINAR

SABhikalgere

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Pawar sharayu shashikant** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Phytoremediation of sewage water sample by using *dracaena sanderianaand epipremnumaureum*" presents her bonafide work in B.Sc- III of the academic year 2020-2021

AKRandive

Mrs. A.K. Randive
PROJECT SUPERVISOR

SAShikalgar

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Rasal Vandana Ramchandra** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Production of alcohol from coconut fiber **"** presents her bonafide work in B.Sc- III of the academic year 2020-2021

AKRandive

Mrs. A.K. Randive
PROJECT SUPERVISOR

SAShikalgar

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Kajal Maruti Salunkhe** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antimicrobial Activities of Leaf Extracts of Guava (*Psidium guajava* L.) on Two Gram-Negative and Gram-Positive Bacteria" presents her bonafide work in B.Sc- III of the academic year 2020-2021

AKRandive

Mrs. A.K. Randive
PROJECT SUPERVISOR

SAShikalgar

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Salunkhe Neha Anandrao** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Review of fluorobenzothiazole Derivatives As Antimicrobial agent" presents her bonafide work in B.Sc-III of the academic year 2020-2021

AKRandive

Mrs. A.K. Randive
PROJECT SUPERVISOR

SASHikalgar

EXAMINAR

SASHikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss Salave Shivani Dattatray** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation of bacteria from agricultural soil showing antifungal activity againtst aspergillus niger" presents her bonafide work in B.Sc- III of the academic year 2020-2021

AKRandive

Mrs. A.K. Randive
PROJECT SUPERVISOR

SASHIKALGAR

EXAMINAR

SASHIKALGAR

CO-ORDINATOR
Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Sankpal Vaishnavi Ramesh** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Phytochemical Analysis of medicinal herb (ocimum sanctum)" presents her bonafide work in B.Sc- III of the academic year 2020-2021

AKRandive

Mrs. A.K. Randive
PROJECT SUPERVISOR

SASHIkalgar

EXAMINAR

SASHIkalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Shinde Akanksha Dipak** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Phytoremediation of waste water by algae" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SSNalawade

Mrs.S.S. Nalawade
PROJECT SUPERVISOR

SASHIkalgar

EXAMINAR

SASHIkalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Shrike Pooja Prakash** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and identification of *tricoderma spp*" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SSNalawade

Mrs.S.S. Nalawade
PROJECT SUPERVISOR

SPShikalgar.

EXAMINAR

SAShikalgar.

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Sonali Digambar Sonawale** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antibacterial Activity and Phytochemicals analysis of Tridax Procumbens" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SSNalawade

Mrs.S.S. Nalawade
PROJECT SUPERVISOR

SASHIKALGAR

EXAMINAR

SASHIKALGAR

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Namarta Eknath Surve** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antimicrobial activity of aloe vera leaf extract" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SSNalawade

Mrs.S.S. Nalawade
PROJECT SUPERVISOR

SASHitalgar

EXAMINAR

SASHitalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Tamboli Shakira Gous** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Enzyme Bioprospection of Marine- Derived Actinobacteria from the Chilean Cost and New Insight in the Mechanism of Keratin Degradation In Streptomyces" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SSNalawade

Mrs.S.S. Nalawade
PROJECT SUPERVISOR

SASHikalgar

EXAMINAR

SASHikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★
BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Dubal Kashmira Ravindra** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antimicrobial activity of fresh garlic juice : an in vitro study" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SSNalawade

Mrs.S.S. Nalawade
PROJECT SUPERVISOR

EXAMINAR

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr.Rutik Maruti Gotpagar** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Identification of microorganisms responsible for spoilage of tomato (lycopersicon esculentum) fruit" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SSNalawade

Mrs.S.S. Nalawade
PROJECT SUPERVISOR

SASKulgar

EXAMINAR

SASKulgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Sciences * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Shweta Sampat Kapurkar** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation ,identification and characterisation of antibiotic producing bacteria from soil" presents her bonafide work in B.Sc-III of the academic year 2020-2021

Sakalawade

Mrs.S.S. Nalawade
PROJECT SUPERVISOR

S.A.Shikalgar

EXAMINAR

S.A.Shikalgar

CO-ORDINATOR
Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Detake Shambhuraj Pandurang** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Extraction methods, Qualitative and Quantitative techniques for screening of phytochemicals from plants" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SSNalawade

Mrs.S.S. Nalawade
PROJECT SUPERVISOR

SASHIKALGAR

EXAMINAR

SASHIKALGAR

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Akshay Chandrakant Gaikwad** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Phosphate solubilization of Bacillus megaterium isolated from non-saline soils under salt stressed condition" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SSNalawade

Mrs.S.S. Nalawade
PROJECT SUPERVISOR

SAShikalgar

EXAMINAR

SAShikalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify **that Mr. Saurabh Chandrakant Sabale** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Enhancing the Decolorizing and Degradation Ability of Bacterial Consortium Isolated from Textile Effluent Affected Area and Its Application on Seed Germination" presents her bonafide work in B.Sc- III of the academic year 2020-2021

SSNalawade

Mrs.S.S. Nalawade
PROJECT SUPERVISOR

SASHitalgar

EXAMINAR

SASHitalgar

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3681

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Attar Siddika Arif** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mr. S.A. Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3682

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Bhagawat Shreya Pramod**of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mr. S.A. Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3686

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Disale Sayali Shashikant** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mr. S.A. Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No:3787

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Dhotre Pallavi Vilas** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mr. S.A. Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No:3788

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Dodke Poonam Ashok** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mr. S.A. Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★
BIOTECHNOLOGY

Roll No: 3789

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Ghadage Harshada Hanamant** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mrs. S.A. Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad
BIOTECHNOLOGY

Roll No: 3790

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Jadhav Yogesh Dadaso** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

SAShikalgar

Miss. S. A. Shikalgar

Project Guide

kGaikwad

Examiner

SAShikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3791

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Jagatap Nishtha Dattatray** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. S. A. Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3792

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. K ale Vishakha Vishvas** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. S. A. Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

Roll No: 3793

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Kanase Prajakta Dattatray** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. S. A. Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

Roll No: 3795

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Kulkarni Ketaki Anant** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. S. A. Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3796

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Momin Reena Rashid** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

A.K.Randive

Mrs. A.K. Randive

Project Guide

K Gaikwad

Examiner

S Adhikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology



Roll No: 3797

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Mulla Mathin Shoukat** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. A.K. Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

Roll No: 3798

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Patil Mrunali Rajendra** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

A.K.Randive

Miss. A.K. Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★
BIOTECHNOLOGY

Roll No: 3700

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Pawar Sharayu Shashikant** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. A.K. Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3701

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Rasal Vandana Ramchandra**of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. A.K. Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3702

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Salunkhe Kajal Maruti** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. A.K. Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology



Roll No: 3711

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Salunkhe Neha Anandrao** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-20221

Miss. A.K. Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3704

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Salave Shivani Dattatray** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. A. K. Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3705

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Sankapal Vaishnavi Ramesh** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. S. A. Shikalgar

Project Guide

Examiner

Course Coordinator
Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3707

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ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Shinde Akanksha Dipak** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mrs. S. S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3708

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ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Shirke Pooja Prakash** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mrs. S. S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3709

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ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Sonawale Sonali Dighambar** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mrs. S. S. Nalawade
Project Guide

Examiner

Course Coordinator
Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3710

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ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss . Surve Namarta Eknath** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mrs. S. S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3711

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Tamboli Shakira Gous** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mrs. S. S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3712

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Dubal Karishma Ravindra** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. S. S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ BIOTECHNOLOGY ★ Karad

Roll No: 3713

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr.Gotpagar Rutik Maruti** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. S.S. Nalwade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3714

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Kapurkar Shweta Sampat** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

SAShikalgar

Miss. S. A. Shikalgar

Project Guide

Examiner

SAShikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3717

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified **that Miss. Detake Shambhuraj Pandurang** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. A.K. Randive

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology



Roll No: 3718

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr. Gaikwad Akshay Chandrakant** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

S.Shikalgar

Miss. S. A. Shikalgar

Project Guide

Mulape

Examiner

S.Shikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3719

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr. Sabale Saurabh Chandrakant**of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-20221

AKRandive

Miss. A.K. Randive

Project Guide

Mulape

Examiner

SAShikalgar

Course Coordinator

Course Co-ordinator
Department of Biotechnology



ॐ

Santosh Milk & Milk Products Pvt. Ltd.

• C - 1 / 1- B, M. I. D. C.,Tasawade , Post : Umbraj - 415109 Tal - Karad, Dist-Satara.
• Tel No. 258189 / 258190 Fax : (02164) - 258195

RFS: SMAMP/07/2021

Date: 30/07/2021

TO WHOMSOEVER IT MAY CONCERN

CERTIFICATE

This is to certify that Miss. **LOHAR ABOLI RAJENDRA,** Student of Yashwantrao Chavan College of Science Karad Have Undergone 30th Days successfully completed inplant Training at **SANTOSH MILK AND MILK PRODUCTS PRIVATE LIMITED** , C1/1B- MIDC Taswade , Tal – Karad , Dist- Satara .

From: 28/06/2021 to 30/07/2021

Her Performance during Training was satisfactory she has undergone fair Exposure of inplant training and Microbiology Section.

We wish her all the success in future and Best of luck…

SANTOSH MILK & MILK PRODUCTS PVT.LTD.

For Santosh Milk & Milk Products Pvt. Ltd.

Mr. Balaso Honmane
General Manager
(General Manager)

M/s Santosh Milk & Milk Products Pvt. Ltd. M.I.D.C. Karad

Gokul

Founded : 16-3-1963 Reg. No. KPR/PRD/ (A) 102

Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd.

B-1, M. I. D. C., Gokul Shirgaon, Kolhapur - 416 234 (M.S.)
• Ph. : 0231- 2672311 to 15 (5 Lines) • Fax : 0231 - 2672374.
• website : www.gokulmilk.coop • E-mail : kpr_gokul@sancharnet.in

KDS/ADMN/ 1564 / 21-22 Date : 31/07/2021

To Whomsoever It May Concern

Certificate

This is to certify that Miss. Akshata Dhananjay Karnik
Student of Yashwantrao chavan college of science karad *has completed Summer / Inplant Training / Project Work in* C.C *Section of our Organisation from* 29 / 06 / 2021 *to* 29 / 07 / 2021 *. During the training period he / she / they was / were found sincere and hardworking.*

We wish him / her / them all the success in future and best luck.

Manager (Admn.)

Gokul

Founded : 16-3-1963 Reg. No. KPR/PRD/ (A) 102

Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd.

B-1, M. I. D. C., Gokul Shirgaon, Kolhapur - 416 234 (M.S.)
• Ph. : 0231- 2672311 to 15 (5 Lines) • Fax : 0231 - 2672374.
• website : www.gokulmilk.coop • E-mail : kpr_gokul@sancharnet.in

KDS/ADMN/ 4711 / Date : 3/8/21

To Whomsoever It May Concern

Certificate

This is to certify that Miss. Pooja B. Bandare
Student of Y.C. College of Science, Karad. *has completed Summer / Inplant Training / Project Work in* Q.C. *Section of our Organisation from* 07/09/2021 to 03/08/2021. *During the training period he / she / they was / were found sincere and hardworking.*

We wish him / her / them all the success in future and best luck.

Manager (Admn.)

ॐ
Santosh Milk & Milk Products Pvt. Ltd.
• C - 1 / 1- B, M. I. D. C., Tasawade , Post : Umbraj - 415109 Tal - Karad, Dist-Satara.
• Tel No. 258189 / 258190 Fax : (02164) - 258195

RFS: SMAMP/07/2021

Date: 30/07/2021

TO WHOMSOEVER IT MAY CONCERN

CERTIFICATE

This is to certify that **Miss. Mane Kishoree Sambhaji,** Student of Yashwantrao Chavan College of Science Karad Have Undergone 30th Days successfully completed inplant Training at **SANTOSH MILK AND MILK PRODUCTS PRIVATE LIMITED** , C1/1B- MIDC Taswade , Tal – Karad , Dist- Satara .

From: 28/06/2021 to 30/07/2021

Her Performance during Training was satisfactory. She has undergone fair Exposure of inplant training and Microbiology Section.

We wish her all the success in future and Best of luck…

SANTOSH MILK & MILK PRODUCTS PVT.LTD.

For Santosh Milk & Milk Products Pvt. Ltd.

Mr. Balaso Honmane
General Manager
(General Manager)

M/s. Santosh Milk & Milk Products Pvt. Ltd. ★ M.I.D.C. Karad ★

SS Distilleries Pvt. Ltd.

Regi. Off. : 27/K/36 B, Sarlashkar Heritage, Bunglow No. 4, Tarabai Park, Kolhapur - 416 003. Ph. : 0231-2661947, Email - ssdistilleries @gmail.com

Site Off. : Shri Bhogawati SSK Ltd. Shahunagar Parite, Tal. : Karveer, Dist : Kolhapur. Ph. : 0231-2385599

Date :- 05/05/2021

Experience Certificate

This is to Certify that **Mr.Mahesh Sitaram Patil** he is working in our Distillery unit as a Distillery Chemist since **1 April 2021 to 30 April 2021** till. During this priod he achived moral Choracter and information about Distillery.

He has good knowledge of handling laboratory analysis, process & Alcohol , fermentation and Distillation .

This Certificate is issued as per his request.

Distillery Manager
S. S. Distillery Pvt. Ltd.

SS Distilleries Pvt Ltd.

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FISSION
BIO SCIENCES

Ref. No. : FISSION/ADMIN/008

Date: 05-08-2021

TO WHOMSOEVER IT MAY CONCERN

This to certify that **Miss. Patil Namrata Dhanaji** MSc. (Microbiology) Student of Yashwantrao Chavan College of Science, Karad. Has completed the Industrial Training from 15th Jun 2021 to 30th July 2021 in our quality control and production section.

During the training period she showed a good working hand on microbiological technics and good knowledge of instrumentation handling. she found sincere and hardworking.

We wish her all the success and best luck for future.

Fission Biosciences * Sangli *

FISSION BIO SCIENCES
Managing Partner

T-2, Royal Ganesh, Opp. Ghadage Patil Hero Showroom,
100 ft road, Sangli-416416
Tal : Miraj, Dist : Sangli, Maharashtra (India)

fissionbio@gmail.com +91 9130047103

Enhancing Lives Globally

GHODAWAT CONSUMER
SANJAY GHODAWAT GROUP

CIN No.: U15100PN2002PTC017370

Dated: 03rd August 2021

CERTIFICATE

This is to Certify That Mrs. Nikita Chandrakant Gaikwad, student of Yashwantrao Chavan College of Science, Karad have undergone 26 Days training at Ghodawat Consumer Pvt. Ltd – Snack Food Division, Gat No-470/5/6/8, A/P-Chipri, Tal-Shirol, Dist-Kolhapur(Maha), Kolhapur, Maharashtra-416101. With effect from 09th July, 2021 to 03rd August, 2021.

Her performance during training was satisfactory; she has undergone fair exposure of inplant training and quality control section.

We wish her a bright and prospective career.

GHODAWAT CONSUMER PVT. LTD. CHIPRI (SNACK FOOD DIVISION)

Authorized Signatory

Ghodawat Consumer Pvt. Ltd – Snack Food Division

SIDDHARTH MILK FOODS (I.) PVT.LTD.

Plot No. 39, Sector J/ Phase - IV, Parvati Co-operative Industrial Estate,
YADRAV-416 145. Tal. Shirol, Dist. Kolhapur. • Ph. : (02322) 252822/23
Tele Fax : (02322) 252565 • E-mail : siddharthmilkfoods@yahoo.co.in

Ref. No. : Adm/801/2021 Date : 12/07/2021

CERTIFICATE

To Whomsoever IT May Concern

This is to certify that **Ms. Pranjali Sanjivkumar Yesumali (M.Sc. Microbiology – II)** student of **Yashwantrao Chavan College of Science Karad** has completed in plant Training From **20Th Jun 2021 to 10th July 2021** in Quality Control Section of our Organisation. During the Training Period she was found sincere and hardworking.

We wish him all the success in future and best of luck.

For Siddharth Milk Foods (I) Pvt. Ltd.

SIDDHARTH MILK FOOD (I) PVT. LTD.

Authorised Signatory

HEAD
DEPARTMENT OF MICROBIOLOGY

FISSION
BIO SCIENCES

Ref. No. : FISSION/ADMIN/007

Date: 05-08-2021

TO WHOMSOEVER IT MAY CONCERN

This to certify that **Miss. Chavan Rucha Manojkumar** MSc. (Microbiology) Student of Yashwantrao Chavan College of Science, Karad. Has completed the Industrial Training from 15th Jun 2021 to 30th July 2021 in our quality control and production section.

During the training period she showed a good working hand on microbiological technics and good knowledge of instrumentation handling. she found sincere and hardworking.

We wish her all the success and best luck for future.

Fission Biosciences * Sangli *

FISSION BIO SCIENCES
Managing Partner

T-2, Royal Ganesh, Opp. Ghadage Patil Hero Showroom,
100 ft road, Sangli-416416
Tal : Miraj, Dist : Sangli, Maharashtra (India)

fissionbio@gmail.com +91 9130047103

Gokul

Founded : 16-3-1963 Reg. No. KPR/PRD/ (A) 102

Kolhapur Zilla Sahakari Dudh Utpadak Sangh Ltd.

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Certificate

This is to certify that Miss. samiksha Suhas Mangletkar *Student of* Yashwantrao chavan college of science karad *has completed Summer / Inplant Training / Project Work in* D.C *Section of our Organisation from* 24/06/2021 *to* 24/07/2021 *. During the training period he / she / they was / were found sincere and hardworking.*

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CERTIFICATE

This is to certify that **Miss. Chandane Shaila Sadanand** is a student of M.Sc. Part –II(Microbiology) from Yashwantrao Chavan College of Science, Karad. She has completed Project work Satisfactorily in our Quality Control (Microbiology Lab) Department.With the subject of **"Production Process And Quality Control"** from 28th Jun 2021 to 28th July 2021.

This certificate is issue her as per request letter dated 28.07.2021

श्री.डी.बी.शिंदाळकर
असि.मॅनेजर (क्वालिटी कंट्रोल)
रा.बा.पा. सह.दुध संघ मर्या;इस्ला

Managing Director

To whomsoever it may concern

Green Valley
Food Processors Pvt. Ltd.

CERTIFICATE

This is to certify that **Mr. Shinde Vishal Dilip** student of **"Yashwantrao Chavan Collage of Science, Karad"** Have successfully completed the Project Work in **"Industrial Training"** from our Organization. For study of this project he was working since a period from **22June 2021 To 27 Jully 2021** under the guidance of our General Manager. During the training period we found that he was sincere and hardworking.

he has fulfilled all the requirements directed by the authorities. We wish him all the success and best of luck for him bright future.

For **Green Valley Food Processors Pvt ltd.**

GREEN VALLEY FOOD PROCESSORS PVT. LTD. Shika Mansion Patan 415 206 PATAN, DIST. SATARA

Authorized Signature

Place : Patan.

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KARAD

DEPARTMENT OF COMPUTERSCIENCE

CERTIFICATE

This is to certify that ,Miss . Shweta Bhaskar Pawar & Miss . **Snehal Amol Kulkarni** have completed the project work entitled "Computer & Mobile Shoppe Management System " for the partial fulfilment of award of the degree "Bachelor of Science Computer Science (B.Sc.CS.(Optional) CBCS- III) of Shivaji University ,Kolhapur for the academic year 2020-2021.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 10 / 05 /2021

Place: Karad.

Prof. N. V.Thorat
(Project Guide)

Examiner

Prof. A.A.Mulla
(Head of Department)

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that Miss Prafulla Ratnakant Ekavade, Miss Pratiksha Mahadev Thorat have satisfactorily completed the Major project entitled as "*Pharmacy Management system*" in the partial fulfillment of award of degree Bachelor Of Computer Science (B.Sc.CS.Optional III) of Shivaji University,Kolhapur during the academic year 2020-2021.

Date: 10/08/ **2021.**
Place: Karad.

Prof.Jirange A.G. & **Prof. A.A.Mulla**

(Project Guide) **Examiner (Head of Department**

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, Miss. Kadam Gauri Dhanaji and Miss.Gaikwad Akshata Bhikaji . have completed project work entitled **"SuperMarket Management System"** For the partial fulfilment of the award of the degree"Bachelor Of Computer Science (B.Sc.CS(Entire-III)(CBCS))" of **Shivaji University,Kolhapur** for the academic year 2020-2021.

To the best of knowledge and belief this is their original work and not submitted Earlier, anywhere for any purpose.

Date :20/3/2021.

Place: Karad.

Prof.A.G.Jirange
(Project Guide)

Examiner

Prof.A.A.Mulla
(Head Of Department)

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that , Miss Jadhav Shweta Sanjay and Jadhav Pooja Sanjay have satisfactorily completed the project work entitled "Car Showroom Management System" for partial fulfillment of award of the degree "Bachelor Of Computer Science (B.Sc. CS (Entire) CBCS - III) of Shivaji University , Kolhapur during the academic year 2020-2021.

To the best knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date:21/09/ 2021.

Place: Karad

Prof. M. S. Jadhav
(Project Guide)

Examiner

Prof. Mulla. A. A
Head Of Department)

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that Mr. Ashish Shantaram Bapat, Mr. Vijay Sanjay Kolekar have satisfactorily completed the Major project entitled as "*Electricity Billing System*" in the partial fulfillment of award of degree Bachelor Of Computer Science (B.Sc.CS.Entire III) of Shivaji University, Kolhapur during the academic year 2020-2021.

Date: 14 /09/ **2021.**
Place: Karad.

Prof. N.V. Thorat
(Project Guide)

Examiner

Prof. A.A.Mulla
(Head of Department)

DATE / /

CERTIFICATE

This is to Ceetify that, the project work entitled MICROCONTROLER BASED SOLAR TRAKER which is being submitted herewith as part of Lead College Activity of shivaji University Kolhapur is the result of original project work Conducted by

Miss- Chalke Aakanksha Arun (Roll No - 3071)
Miss - Kadam Vrushali Ravindra (Roll No - 3072)
Miss - Mohite pratiksha Uttam (Roll No - 3080)

Under by Supervision and guidence, the project written by us has not formed earlier the basis for the award of any degree or diploma or any other Similar work.

Date :-
Place :-

Head of Department.

Shri. Mulla. A. A
(project Guide)

principle.

Yashwantrao Chavan College of Science ★ Karad ★ ELECTRONICS

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE , KARAD

DEPARTMENT OF STATISTICS

PROJECT WORK

CERTIFICATE

This is certify that,

Miss. Shinde Manjusha Sudhakar

Roll No. - 3052 Exam Seat No. - has actively participated in the project work held in month of July 2020-21 & successfully completed under the guidance of Mrs. Neha Kumbhar.

Neha.
Signature of Guide department

Neha
Head, Statistics

8/8/2021
Signature of examiner

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

Shri Shivaji Education Society, Karad

Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad 415124 Maharashtra

CERTIFICATE

This certifies that

MISS. RUTUJA VASANT KACHARE

has successfully completed the Project on

Census India Population 2011

Under the guidance of Mrs. Neha Kumbhar.

Head

5/8/2024

Signature of Guide

7/8/2024

Statistics Department

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

Shri Shivaji Education Society, Karad

Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

CERTIFICATE

This certifies that

MISS. Jagruti Dhananjay Yadav

has successfully completed the Project on

Realation between age of Mother and her eldest child

Under the guidance of Mrs. Neha Kumbhar.

Head

Signature of Guide

8/5/2021

Statistics Department

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

CERTIFICATE

This is certify that,
Mr. /Miss.- Sangave D.T., Miss, Salunkhe S.N., Mr. Yadav S.S.
Roll No. *Has actively participated in the project work*
Held in month of August 2021, under the guidance of Miss.
Kumbhar N. S.

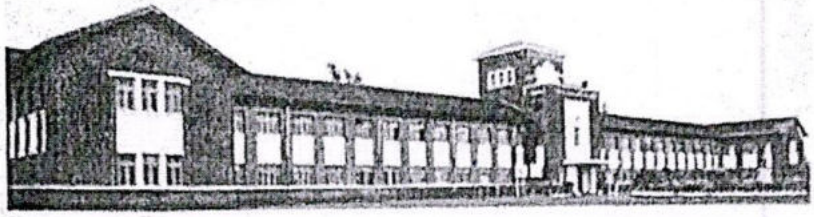
Exam. Seat No. :

8/8/2021
Signature of Guide

Head of the
Statistics Department

8/8/2021
Signature of Examiner

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

Department of statistics

(2020-21)



Effect of lockdown/pandemic on mental health

Made by-

Mayuri Patil (3046)

Pragati Sonwalkar (3054)

Shivani Thorat (3055)



8/8/2021

SHRI SHIVAJI EDUCATION SOCIETY'S

Yashwantrao Chavan College of Science ,karad.

CERTIFICATE

Department of Statistics

This is to certify that has successfully completed the project on,

" ANALYSIS OF MONTHLY RAINFALL IN MAHARASHTRA STATE "

For the partial fulfillment of Bachelor of science degree in statistics ,under my supervision as per rules & regulations of shivaji university ,Kolhapur during the academic year 2020-21 & submitted the same .This work represents bonafide work of these students

Sr.no	Name Of Studunts	Roll No
1	Miss. Pawar Samiksha Sunil	3048
2	Miss.Shinde Mayuri Suresh	3053

Teacher in charge **Examiner** **Head of Department**

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

YASHAVANTRAO CHAVHAN COLLAGE OFSCIENCE, KARAD

DEPARTMENT OF STATISTICS

PROJECT WORK (2020-2021)

CERTIFICATE

This is certifythat,

Miss. Mulla Sultana Sadruddin

Miss. Patil Monika Sanjay

Roll No.3045&3047 has actively participated in the project work

Held In of February 2021,under the guidance of Shri Kumbhar N. and Nikam M.

8/8/2021

Signature of Guide

9/8/2021

Statistics department

18/08/2021

Signature of Examiner

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

" Statistical Study of Analysis of Covid-19 Vaccination "

Exam Seat No.- Date:

Roll No. – 3044

Shri Shivaji Education society Karad, Board for Higher Education's

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Vidyanagar, karad-415124

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Department of Statistics

CERTIFICATE

This is to certify that Miss.

Sunita Karande

Of B.Sc.III Statistics have completed the Statistical project satisfactorily on" Statistical Study of Analysis of Covid-19 Vaccination " as prescribed by Shivaji university, Kolhapur as a fulfillment of syllabus during the year 2020-2021.

Co-ordinator **Head of Department** **Principal**

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

CERTIFICATE

Department of Statistics

This is to certify that has successfully completed the project on,

Analysis of Students behaviour towards the PUBG game.

For the partial fulfilment of Bachelor of Science degree in Statistics , under my supervision as per rules and regulations of Shivaji university, Kolhapur during the academic year 2020-21 and submitted the same. This work represents bonafide work of these students,

Sr.No.	NAME OF STUDENT	ROLL NO.
1.	MISS. PAWAR NIKITA SAMBHAJI	3058

8/8/2021
Teacher incharge

8/8/2021
Examiner

8/8/2021
Head
Department of Statistics
(Y.C. College , Karad)

Yashwantrao Chavan College of Science * Karad * STATISTICS

A Project report

On

"ANALYSIS OF VEGITABLE JUICES"

Submitted to

Department of Chemistry,

Yashwantrao Chavan College of Science, Karad.

During the course of

Bachelor of Science in

Chemistry

By

MISS.Sheetal Janardan Kadam.

UNDER THE GUIDANCE OF

Dr. A.V.Mali

Associate Professor

Dept. of Chemistry,

Yashwantrao Chavan College of Science, Karad.

(Year 2020 – 2021)

DEPARTMENT OF CHEMISTRY

DECLARATION

This is to certify that ,

MISS. Sheetal Janardan Kadam have submitted the project entitled **"ANALYSIS OF VEGETABLE JUICES"** for the year 2020-2021. This project was carried out under my guidance and supervision.

Dr. A.V.Mali

Project guide

Exam.PRN No- 2017065069 Roll No:- 3481

Department of Chemistry

CERTIFICATE

This is to certify that,

MISS. Sheetal Janardan Kadam have submitted the project entitled **"ANALYSIS OF VEGETABLE JUICES"** for the year 2020-2021. This project is carried out under my guidance and supervision. With the best my knowledge this is his original work and submitted for the degree of B.Sc. in Chemistry of Shivaji University, Kolhapur.

Dr. A.V.Mali
Project guide

Head
Department of chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of
Science, Karad

External Examiners

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide **Dr. A.V. Mali** Assistant Professor Department of Chemistry for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.

I also extend my sincere thanks to Dr S. H. Burungale Associate Professor and Head of the Department of Chemistry for providing the laboratory facilities.

My sincere thanks are due to Principal Dr. S. B. Kengar for his constant encouragement.

I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this project.

Name of Students

MISS.Sheetal Janardan Kadam

Place : karad
Date:

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Introduction

Vegetable juice (also referred as: Green Drink) is a juice drink made primarily of blended vegetables and also available in the form of powders.

Vegetable juice is often mixed with fruits such as apples or grapes to improve flavor. It is often touted as a low-sugar alternative to fruit juice,
although some commercial brands of vegetable juices use fruit juices as sweeteners, and may contain large amounts of sodium.

Our body needs important nutrients to support its healthy condition. That is why it is imperative that our food consumption should include healthy foods that contain good amount of nutrients sufficient enough to supply our body with its required daily nutrition. Nutrients like carbohydrates, proteins, fats, vitamins, minerals, etc. are play vital and specific role to develop and sustain body.

Drinking juice is an effective method to promote consumption of fruit and vegetables, and is very popular in many countries. Although the composition of fruits and vegetables is different from that of edible potion of fruits and vegetables they contain polyphenols, vitamins, and minerals fro fruits and vegetables. This project deals with finding out

various constituents and compositions of vegetables and fruits.

Analyzing the type of nutrient present in a food item helps plan a balanced diet. A balanced diet can be prepared according to the energy requirement which varies depending on age, sex, size, metabolic rate and activity level. In this project presence of Carbohydrates, Proteins. Fats and minerals are analyzed through different experiments. Following is a brief note on these nutrients

The presence of carbohydrates, proteins and fats in any food is detected by performing tests with the extract of the food. The vegetables and fruits are tested for these nutrients with the help of tests such as Molisch's Test, Fehling's Test, Tollen'sg test, etc. Test for minerals are also performed.

- **Nutrients**

A) Carbohydrate

The carbohydrates are the optically active polyhydroxy aldehydes or ketones or the compounds which produce such units on hydrolysis. Carbohydrates are the most common source of energy in living organisms. Foods high in simple carbohydrates include fruits, sweets and soft drinks. Foods high in complex carbohydrates include breads, pastas, beans, potatoes, bran, rice, and cereals. Carbohydrates are used as storage molecules as starch in plants and glycogens in animal.

➢ Role of carbohydrates in body is as follows:

1. Providing energy and regulation of blood glucose.
2. Biological recognition processes.
3. Dietary fiber.
4. Sparing the use of proteins for energy.
5. Breakdown of fatty acids and preventing ketosis.

B) Protein

Proteins (also known as polypeptides) are organic compounds made of amino acids arranged in a linear chain and folded into a globular form. Proteins are the basis of many animal body structures (e.g. muscles, skin, and hair). Each molecule is composed of amino acids, which are characterized by inclusion of nitrogen and sometimes sulphur (these components are responsible for the distinctive smell of burning protein, such as the keratin in hair). The body requires amino acids to produce new proteins (protein retention) and to replace damaged proteins. Protein contains 16.8 kilojoules (4 kilocalories) per gram. In the case of protein, this is somewhat misleading as only some amino acids are usable for fuel. Chief sources of protein are milk, meat, fish,etc.

C) Fat

A molecule of dietary fat typically consists of several fatty acids (containing long chains of carbon and hydrogen atoms), bonded to a glycerol. They are typically found as triglycerides (three fatty acids attached to one glycerol backbone). Fats may be classified as saturated or unsaturated depending on the detailed structure of the fatty acids involved. Fats contain 37.8 kilojoules (9 kilocalories) per gram.

D) Minerals

Dietary minerals are the chemical elements required by living organisms, other than the four elements carbon, hydrogen, nitrogen, and oxygen that are present in nearly all organic molecules.

1. **Calcium** - A common electrolyte, but also needed structurally (for muscle and digestive system health, bone strength, some forms neutralize acidity) may help clear toxins, provides signaling ions for nerve and membrane functions.
2. **Magnesium** - Required for processing ATP and related reactions (builds bone, causes strong peristalsis, increases flexibility, increases alkalinity)
3. **Phosphorus** - Required component of bones; essential for energy processing prevent anemia

• Importance of fruits and vegetable juices:

1. Tomato juice is known for anti-ageing.

2. Tomato contains an enzyme contain lycopene, that is useful to control prostate cancer.

3. Kiwi regulate blood pressure due to presence of potassium.

4. Apple helps to release toxin from the body and thereby improves the digestion.

5. Pomegranate juice is rich in vitamin A,C,and E.

6. Strawberry it known for skin cleansing juice. So to minimise the impacts of pimples and wrinkles, etc.

7. Orange juice helps to clear the blockages and enhances the heart function.

8. Mango juice helps to cleanse blood . It also act as dis-infectants.

Determine the presence of carbohydrates, proteins, fats and minerals in vegetable juices.

Apparatus

1. pH paper
2. Funnel
3. Boiling Tube
4. Burner

Chemicals

1.Vegetable Juice

2. Disodium Hydrogen Phosphate Solution (Na_2HPO_4)

3. Concentrated Nitric Acid (conc.HNO_3)

4. Iodine Solution

5. Tehling's Solution A& B

6. Ammonium Chloride Solution(NH_4OH)

7. Ammonium Hydroxide Solution(NH_4OH)

8. Ammonium Oxalate Solution$(NH_4)_2(C_2O_4)$

9. Picric Acid($C_6H_3N_3O_7$)

10. Sodium hydroxide solution (NaOH)

11. Copper Sulphate Solution ($CuSO_4$)

12. Disodium hydrogen phosphate solution (Na_2HPO_4)

13. Concentrated Nitric Acid (Conc. HNO_3)

- **Procedure**

The vegetable juices are diluted using distilled water. The distilled water is added to it in order to remove color and to make it colorless so that color change can be easily watched and noted down. Now test for food substance is taken down with the solution.

1. Test For Acidity – Take 5ml of juice in a test tube and pH values should be noted down by dipping it in the test-tube. If it turns red, it means that the juice is acidic else it is basic..

2. Test For Starch – Take 2ml of vegetable juice in a test tube, and add a few drops of iodine solution to it. If the solution turns blue in color it indicates the presence of starch.

3. Test for Proteins – Take 5ml of 5% of NaOH solution and add 2 drops of CusO4 known as burial solution and add juice and shake well. If the solution turns violet in color it indicates the presence of proteins.

4. Test For Carbohydrates – Take 2ml of Tehling's solution A and B and 1ml of Tehling's solution B in a Test tube. If the solution turns red it indicates the presence of sugar like maltose, glucose, fructose and lactose.

5. Test For Potassium – Add 2ml of juice in a test tube and picric acid, yellow color precipitate indicates the presence of potassium.

6. Test For Calcium – Add 2 ml of vegetable juice and add **NH4Cl** solution. Filter the solution and to the filtrate add 2 ml of ammonium oxalate solution. White precipitate indicates the presence of calcium.

7. Test for Magnesium – Add NH4OH and excess Disodium Hydrogen Phosphate to test tube with a glass rod. White precipitate indicates the presence of magnesium.

Sample - I

- **Cucumber**

Salient features:

Cucumber (Cucumis sativus) is a widely cultivated plant in the gourd family, Cucurbitaceous. It is a creeping vine that bears cylindrical fruits that are used as culinary vegetables. There are three main varieties of cucumber: slicing, pickling, and burpless. Within these varieties, several different cultivars have emerged.

The cucumber is originally from Southern Asia, but now grows on most continents. Many different varieties are traded on the global market.

The cucumber is a creeping vine that roots in the ground and grows up trellises or other supporting frames, wrapping around supports with thin, spiraling tendrils. The fruit of the cucumber is roughly cylindrical, elongated with tapered ends, and may be as large as 60 centimeters (24 in) long and 10 centimeters (3.9 in) in diameter.

Having an enclosed seed and developing from a flower, botanically speaking, and cucumbers are classified as pepoes, a type of botanical berry. Much like tomatoes and squash they are often also perceived, prepared and eaten as vegetables. Cucumbers are usually more than 90% water.

- **Observation Table**

Test	Observation	Inference
Acid /Base	pH Turns Red	Acidic
Starch	No Blue Colour	Absence of Starch
Protein	No Violet Colour	Absence of Protein
Carbohydrate	Red colour	Presence of carbohydrate
Potassium	No Yellow Precipitate	Absence of potassium
Calcium	White Precipitate	Absence Of Calcium
Magnesium	White precipitate	Presence of Magnesium

Sample - II

- Carrot

Sailent Feature:

The Carrot (Dacus carota sativus) is a root vegetable, usally orange in colour, though purple, red, white, and yellow varieties exist. It has a crisp texture when fresh. The most commonly eaten part of a carrot is a taproot, although the greens are sometimes eaten as well. It is a domesticated form of the wild carrot Daucus carota, native to Europe and southwestern Asia. The domestic carrot has been selectively bred for its greatly enlarged and more palatable, less woody-textured edible taproot.

The Food and Agriculture Organization of the United Nations (FAO) reports that world production of carrots and turnips (these plants are combined by the FAO for reporting purposes) for calendar year 2011 was almost 35.658 million tones. Almost half were grown in China. Carrots are widely used in many cuisines, especially in the preparation of salads, and carrot salads are a tradition in many regional cuisines.

- **Observation Table**

Test	Observation	Inference
Acid /Base Starch Protein Carbohydrate	pH Turns Red No Blue Colour No Violet Colour Red colour	Acidic Presence of Starch Absence of Protein Presence of carbohydrate
Potassium	Yellow Precipitate	Presence of potassium
Calcium	No White Precipitate	Absence Of Calcium
Magnesium	No White precipitate	Absence of Magnesium

Sample - III

- **Tomato**

Salient Features:

The tomato (etymology and pronunciation) is the edible, often red fruit/berry of the nightshade Solanum lycopersicum, commonly known as a tomato plant. The tomato is consumed in diverse ways, including raw, as an ingredient in many dishes, sauces, salads, and drinks. While it is botanically a berry fruit, it is considered a vegetable for culinary purposes, which has caused some confusion.

The species originated in the South American Andes and its use as a food originated in Mexico, and spread throughout the world following the Spanish colonization of the Americas. Its many varieties are now widely grown, sometimes in greenhouses in cooler climates. The plants typically grow to 1–3 meters (3–10 ft) in height and have a weak stem that often sprawls over the ground and vines over other plants.

It is a perennial in its native habitat, although often grown outdoors in temperate climates as an annual. An average common tomato weighs approximately 100 grams (4 oz).

- Observation Table

Test	Observation	Inference
Acid /Base Starch Protein Carbohydrate	pH Turns Red No Blue Colour No Violet Colour Red colour	Acidic Presence of Starch Absence of Protein Presence of carbohydrate
Potassium	Yellow Precipitate	Presence of potassium
Calcium	White Precipitate	Presence Of Calcium
Magnesium	No White precipitate	Absence of Magnesium

Result

After performing the tests for carbohydrates, proteins, fats and minerals, following can be concluded about their presence in different vegetables.

2. Tomato contains carbohydrates, proteins, calcium, magnesium.

3. Cucumber contains carbohydrates, proteins, fats, calcium, magnesium, iron.

4. Carrot contain starch, carbohydrates & potassium.

- **Conclusion:**

. From the table given behind it can be conducted that most of the fruits and vegetables contain carbohydrate and vegetable contain carbohydrate to small extent. Proteins are present in small quantity. Carbohydrates and starch are rich in tomato and cucumber. Therefore one must not only depend on fruits and vegetables for a balanced diet.

- **References:**

1. Bittner,D. R. and K. Q. Stepheson.(1968).

   Reflectance and transmittance properties of tomato.

2. Dull, G. G and G.S. birth (1989).

   Non destructive evaluation of fruit quality.

3. www.the chemistry guru.com.

A Project report on

Qualitative And Quantitative Milk Analysis

Submitted to

Department of Chemistry,

Yashwantrao Chavan College of Science, Karad.

During the course of Bachelor of Science in Chemistry

By

Jagdale Rutuja Rajendra

Jagtap Vaishnavi Prakash

Kothawale Gauree Mahadev

Nangare Rina Rajaram

UNDER THE GUIDANCE OF

Prof.A.V.Mali

Prof.Dr.R.S.Patil

Dept. of Chemistry,

Yashwantrao Chavan College of Science, Karad.

(Year 2020 – 2021)

Exam. Seat No/PRN No..... .Roll No:3246,3252,3275,3325

Department of Chemistry

CERTIFICATE

This is to certify that, **1)Jagdale Rutuja Rajendra 2)Jagtap Vaishnavi Prakash 3)Kothawale Gauree Mahadev 4)Nangare Rina Rajaram** have submitted the project entitled **"Qualitative And Quantitative Milk Analysis"** for the year 2020-2021. This project is carried out under my guidance and supervision. With the best my knowledge this is his original work and submitted for the degree of B.Sc.III in Chemistry of Shivaji University, Kolhapur.

Project Guide

Yashwantrao Chavan College of Science ★ CHEMISTRY ★ Karad

Head Department of Chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

External Examiners

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project Dr.A.V.Mali , Assistant Professor Department of Chemistry for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.

I also extend my sincere thanks to Dr S. H. Burungale Associate Professor and Head of the Department of Chemistry for providing the laboratory facilities.

My sincere thanks are due to Principal Dr. S. B. Kengar for his constant encouragement.

I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this project.

1) Jagdale Rutuja Rajendra

2) Jagtap Vaishnavi Prakash

3) Kothawale Gauree Mahadev

4) Nangare Rina Rajaram

A Project report

On

WATER ANALYSIS

Submitted to

Department of Chemistry,

Yashwantrao Chavan College of Science, Karad.

During the course of

Bachelor of Science in

Chemistry

By

1SUSHANT SHIVAJI JADHAV SHUBHAM ANIL THORAT

3.ONKAR MADHUKAR DESHMANE, 4.SUHAS SAMBHAJI LOLE .

UNDER THE GUIDANCE OF

Dr. A. V. Mali

Associate Professor

Dept. of Chemistry,

Yashwantrao Chavan College of Science, Karad.

(Year 2020 – 2021)

Department of Chemistry

CERTIFICATE

This is to certify that,

Name of Student	PRN NO.	Roll no
1SUSHANT SHIVAJI JADHAV	2018080593	3240
2. SHUBHAM ANIL THORAT	2018011321	3453
3. ONKAR MADHUKAR DESHMANE	2018014274	3196
4. SUHAS SAMBHAJI LOLE	2018015473	3287

_____ ,Have submitted the project entitled **"WATER ANALYSIS"** for the year 2020-2021. This project is carried out under my guidance and supervision. With the best my knowledge this is his original work and submitted for the degree of B.Sc. in Chemistry of Shivaji University, Kolhapur.

Project guide

Head

Department of Chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

External Examiners

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

DEPARTMENT OF CHEMISTRY

CERTIFICATE

This is to certify that,

Name of Student	PRN NO.	Roll no
1SUSHANT SHIVAJI JADHAV	2018080593	3240
2. SHUBHAM ANIL THORAT	2018011321	3453
3. ONKAR MADHUKAR DESHMANE	2018014274	3196
4. SUHAS SAMBHAJI LOLE	2018015473	3287

Have submitted the project entitled "**WATER ANALYSIS**" for the year 2020-2021. This project was carried out under my guidance and supervision.

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Project guide

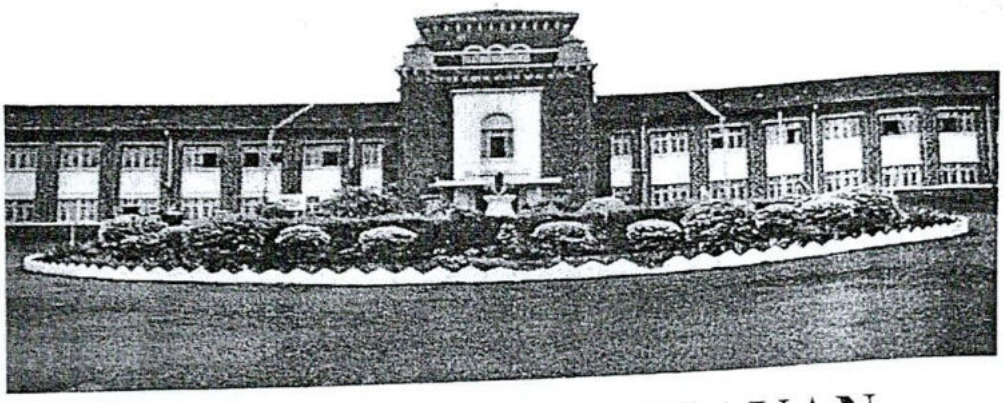
(Name of Guide)

।। जे का रंजले गांजले । त्यांसी करूया आपुले ।।

"Be one with downtrodden and the under privileged"

SHIR SHIVAJI EDUCATION SOCIETY'S

BOARD FOR HIGHER EDUCATION, KARAD



YASWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar Karad – 415124

Bagwan Saba Manik

Roll No – 3162

Prof - Dr. Mahadik Sir

Dr. Ankush Mali

2021

SHIR SHIVAJI EDUCATION SOCIETY'S

YASWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Chemistry

CERTIFICATE

This is certified that project report entitled "analysis of different soaps". Is submitted by Miss. Bagwan Saba Manik in fulfillment or project work prescribed by Shivaji university Kolhapur for BSc 3rd year course in chemistry have been completed satisfactory under the guidance during the academic year 2020-2021 the conclusion drawn are based on the experimental work carried by her .

Date -

Place - Karad

Dr. Ankush Mali
Project Guide

Prof. Dr. Mahadik Sir
Project Guide

student sign

SmBagwan

Declaration

I hearby declare that the project work has done by me and it has not been previously formed the basis of the award of any degree or diploma. I hearby declare that the project report entitled "Analysis Different of soaps" is submitted by me to 'Yashwantrao Chavan College of Science, Karad'. In Chemistry department, Under the guidance of prof. Mr. Mahadik Sir and is my original work

The empi rical finding in this project report is based on the data collected by us during the course of the project work.

Place -

Date-

SmBagwan

Student name

Bagwan Saba Manik

Exam. Seat No/PRN No.....

Roll No:-

Department of Chemistry

CERTIFICATE

This is to certify that, B.Sc.III have submitted the project entitled "Determination of Percentage of Phosphorous Nitrogen, and Potassium in Soil" for the year 2020-2021. This project is carried out under my guidance and supervision. With the best my knowledge this is his original work and submitted for the degree of B.Sc. in Chemistry of Shivaji University, Kolhapur.

A.V. Mali
Project guide

Head
Department of Chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

External Examiners

DEPARTMENT OF CHEMISTRY

CERTIFICATE

This is to certify that B.Sc. III have

submitted the project entitled determination of percentage of Phosph
orous, Nitrogen and potassium in soil
for the year 2020-2021. This project was carried out

under my guidance and supervision.

Project guide

A.V. mali

(Name of Guide)

A Project report

On

Determination of Percentage of Phosphorous Nitrogen and Potassium in soil

Submitted to

Department of Chemistry

Yashwantrao Chavan College of Science, Karad

During the course of

Bachelor of Science in

Chemistry

By

Sr	Name of The Student	Roll no	PRN no
1	Jadhav Durga Ramchandra	3228	2018019038
2	Jagadale Payal Hanmant	3243	2018014437
3	Sande Alisha Yunus	3403	2018011315
4	Gurav Pradnya Laxman	3220	2018019036
5	Dupate Dnyaneshwari Dilip	3209	2018014406

Under The guidance of

Associate Professor

Dept. of Chemistry

Yashwantrao Chavan College of Science,Karad

(Year 2020-2021)

A Project report

On

Synthesis of inorganic pigments by precipitation

Submitted to

Department of Chemistry,

Yashwantrao Chavan College of Science, Karad.

During the course of

Bachelor of Science in

Chemistry

By

Rasika sanjay bandal

UNDER THE GUIDANCE OF

Mali sir

Associate Professor

Dept. of Chemistry,

Yashwantrao Chavan College of Science, Karad.

(Year 2020 – 2021)

Exam. Seat No/PRN No..... Roll No:-

Department of Chemistry

CERTIFICATE

This is to certify that **Rasika sanjay bandal** have submitted the project entitled "**Synthesis of inorganic pigments by precipitation**" for the year 2020-2021. This project is carried out under my guidance and supervision. With the best my knowledge this is his original work and submitted for the degree of B.Sc. in Chemistry of Shivaji University, Kolhapur.

Project guide

Head
Department of Chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

A Project report

On

"ESTIMATION OF SAPONIFICATION VALUE OF OIL"

Submitted to

Department of Chemistry,

Yashwantrao Chavan College of Science, Karad.

During the course of

Bachelor of Science in

Chemistry

By

Sr.No.	Name	Roll No.
1	Miss. Chavan Pratiksha Shivaji	3179
2	Miss.Chavan Rutuja Rajendra	3181
3	Miss. Chavan Sakshi Rajendra	3182

UNDER THE GUIDANCE OF

Dr.A.V.Mali

Associate Professor

Dept. of Chemistry,

Yashwantrao Chavan College of Science, Karad.

(Year 2020 – 2021)

Exam PRN NO – 2018018882	Roll No – 3179
2018013061	3181
2018011490	3182

Department of Chemistry

CERTIFICATE

This is to certify that, **Chavan Pratiksha Shivaji, Chavan Rutuja Rajendra, Chavan Sakshi Rajendra** have submitted the project entitled **"Estimation of Saponification Value of Oil"** for the year 2020-2021. This project is carried out under my guidance and supervision. With the best my knowledge this is his original work and submitted for the degree of B.Sc. in Chemistry of Shivaji University, Kolhapur.

Project guide

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Department of chemistry

Yashwantrao Chavan College of Science CHEMISTRY Karad

External Examiners

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE KARAD

DEPARTMENT OF CHEMISTRY

DECLARATION

This is to certify that ,

Sr.No.	Name	Roll No.
1	Miss.Chavan Pratiksha Shivaji	3179
2	Miss.Chavan Rutuja Rajendra	3181
3	Miss. Chavan Sakshi Rajendra	3182

Have submitted the project entitled "**ESTIMATION OF SAPONIFICATION VALUE OF OIL**" for the year 2020-2021. This project was carried out under my guidance and supervision.

Project guide

Dr.A.V.Mali

A Project report

On

Title of Project

Submitted to

Department of Chemistry,

Yashwantrao Chavan College of Science, Karad.

During the course of

Bachelor of Science in

Chemistry

By

Sr.No	Name	PRN. No	Roll No
1	Shinde Vaishnavi Prakash	0018035956	3428
2	Thorat Sheweta Mahadev	2018043899	3454
3	Thorat Akshata Rajendra	2018011474	3446
4	Mohite Namrata Sambhaji	2018020381	3308
5	Yadav Dipali Satish	2018079296	3464

UNDER THE GUIDANCE OF

Mali sir

Associate Professor

Dept. of Chemistry,

Yashwantrao Chavan College of Science, Karad.

(Year 2020 – 2021)

Department of Chemistry

CERTIFICATE

This is to certify that,

1) Shinde Vaishnavi Prakash.

2) Thorat Sheweta Mahadev

3) Thorat Akshata Rajendra.

4) Mohite Namrata Sambhaji

5) Yadav Dipali Satish.

have submitted the project entitled **"To sutdy and calculate the Containt of Ascorbic in Different Citrus Fruits tital of projest"** for the year 2020-2021. This project is carried out under my guidance and supervision. With the best my knowledge this is his original work and submitted for the degree of B.Sc. in Chemistry of Shivaji University, Kolhapur.

Project guide
Mali sir

Head
Department of chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

External Examiner

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide **Ankush mali sir,** Assistant Professor Department of Chemistry for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.

I also extend my sincere thanks to Dr S. H. Burungale Associate Professor and Head of the Department of Chemistry forproviding the laboratory facilities.

My sincere thanks are due to Principal Dr. S. B. Kengar for his constant encouragement.

I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this project.

Name of Students

1)Shinde Vaishnavi Prakash.

2)Thorat Sheweta Mahadev

3)Thorat Akshata Rajendra.

4)Mohite Namrata Sambhaji

5)Yadav Dipali Satish.

DECLARATION:

A Project

reportOn

Effect of COVID-19 on Environment

Submitted to

Department of Chemistry,

Yashwantrao Chavan College of Science,
Karad.

During the course

of

Bachelor of Science inChemistry

By

Gaurav Ramesh Dubal

Pranav Ramesh Jagtap

Prashant Dattatraya

sankpalKiran Sunil

Thorat

Sanket Jaywant Thorat

UNDER THE GUIDANCE OF

Lt.Dr.A.V.Mali

Associate Professor

Dept. of Chemistry,

Yashwantrao Chavan College of Science, Karad.

(Year 2020 – 2021)

Exam.Seat No/

PRN No :- 2018014296 — Roll No:- 3206
2018025560 — 3250
2018016418 — 3406
2018030444 — 3448
2018025543 — 3452

Department of Chemistry

CERTIFICATE

This is to certify that, ***Gaurav Ramesh Dubal, PranavRamesh Jagtap, Prashant Dattatraya sankpal, Kiran Sunil Thorat, Sanket Jaywant Thorat.*** have submitted the project entitled "Effect Of Covid-19 On Environmental" for the year 2020-2021. This project is carried out under my guidance and supervision. With the best my knowledge this is his original work and submitted for the degree of B.Sc. in Chemistry of Shivaji University,Kolhapur.

Head
Department of Chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Project guide
Lt.Dr.A.V.Mali

External Examiners

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

DEPARTMENT OF CHEMISTRY

CERTIFICATE

This is to certify that **Gaurav Ramesh Dubal, Pranav Ramesh Jagtap, Prashant Dattatraya sankpal, Kiran Sunil Thorat, Sanket Jaywant Thorat.** have submitted the project entitled "***Effect Of Covid-19 On Environmental***" for the year 2020-2021. This project was carried out under my guidance and supervision.

Project guide

Lt.Dr.A.V.Mali

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide. *Lt.Dr.A.V.Mali* Assistant Professor Department of Chemistry for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.

I also extend my sincere thanks to Dr S. H. Burungale Associate Professor and Head of the Department of Chemistry for providing the laboratory facilities.

My sincere thanks are due to Principal Dr. S. B. Kengar for his constant encouragement.

I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this project.

Name of Students

Gaurav Ramesh Dubal

Pranav Ramesh Jagtap

Prashant Dattatraya sankpal

Kiran Sunil Thorat

Sanket Jaywant Thorat

SHIVAJI SHIKSHAN SANSTHA
YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,
KARAD

A Project Report
On

"ANALYSIS OF SODIUM LEVEL IN JUNK FOOD BY FLAME PHOTOMETER"

Submitted to –
Department of Chemistry,
During the course of
Bachelor of Science In
Chemistry

By
Mr. Ghadage Akshay Sharad
Mr. Pokale Amit Dadaso
Mr. Walimbe Chaitanya Ravindra
Mr. Wagh Omkar Suresh

UNDER THE GUIDANCE OF
Prof. S. H. Burungale
Prof. G. B. Dhake
Prof. A. V. Mali
Prof. A. N. Bhingare
Department of Chemistry,
Yashwantrao Chavan College of Science, Karad

(Year 2020-21)

Shivaji shikshan sanstha's

Yashwantrao Chavan College of Science, Karad.



Under Shivaji University, Kolhapur

Pollution

B.Sc.III

2020-2021

A

Project Report

On

"TO STUDY BIOMEDICAL WASTE MANAGEMENT COVID-19"

Submitted By

Sr.No.	Name of Student	Roll No	Exam No
1	Amit shukracharya wagh	3670	
2	Rohit Chandrakant jadhav	3671	

DECLARATION

We have under signed hear by declare that project report entitled "**To study biomedical waste management covid-19**" written and submitted by us to Shivaji University, Kolhapur for Environmental studies. We further declare that the empirical result in this project are based on the data collected by us. We have understand liable to be punished as the authorized deem fill.

Date :

Place : Karad

Sr.No.	Name of student	Roll No	Exam No
1	Amit shukracharya wagh	3670	
2	Rohit Chandrakant jadhav	3671	

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Kadam Bhagyashri Bharat** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antagonistic potential of different isolates of Trichoderma against Rhizoctonia solani." presents her bonafide work in B.Sc- III of the academic year 2021-2022.

SSNalawade

Mrs. S.S. Nalawade
PROJECT SUPERVISOR

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Pawar Vaishnavi Vishwanath** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and Characterisation of Choleserol Degrading Bacteria from Slaugher and Lather House Wastes ." presents her bonafide work in B.Sc- III of the academic year 2021-2022.

Akanse.

Miss. A.K.Kanase
PROJECT SUPERVISOR

TVlape.

EXAMINAR

SSNalawade.

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Pisal Aishwarya Adhikrao** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and Characterisation of Pathogenic Organism Isolated from Poultry Feed " presents her bonafide work in B.Sc- III of the academic year 2021-2022.

SSNalawade

Mrs. S.S. Nalawade
PROJECT SUPERVISOR

TVlape

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Shelke Gayatri Dadasaheb** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Production of single cell protein from Orange Peels" presents her bonafide work in B.Sc- III of the academic year 2021-2022.

SSNalawade

Mrs. S.S. Nalawade
PROJECT SUPERVISOR

MKlape
EXAMINAR

SSNalawade
CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Tirmare Vaishnavi Jeevankumar** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and Characterisation of Phenol Degrading Bacteria from Crab Gut " presents her bonafide work in B.Sc- III of the academic year 2021-2022.

Akanse

Miss. A.K.Kanase
PROJECT SUPERVISOR

Mulape

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Torane Akanksha Ramaji** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and Characterisation of Lipase Producing bacteria from crab Gut" presents her bonafide work in B.Sc- III of the academic year 2021-2022

Akanse.

Mrs. A. K. Kanase
PROJECT SUPERVISOR

MVlape.

EXAMINAR

SSNalawade.

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss.Yadav Shradha Subhash** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Studies on Antibacterial activity of some Indian Spices" presents her bonafide work in B.Sc- III of the academic year 2021-2022

Miss. S.A. Shikalgar	MVlape	SSNalawade
PROJECT SUPERVISOR	EXAMINAR	CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Hatte Sayali Dashrath** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antimicrobial activity of onion extracts on common pathogens" presents her bonafide work in B.Sc- III of the academic year 2021-2022

Miss. S.A. Shikalgar	Mulape	SSNalawade
PROJECT SUPERVISOR	EXAMINAR	CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Gaikwad Lata Mangesh** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Extraction, Identification and applicationsof Lycopene from Tomato" presents her bonafide work in B.Sc- III of the academic year 2021-2022

Akanse

Miss. A.K.Kanase
PROJECT SUPERVISOR

Mlape.

EXAMINAR

SSNalawade.

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Hake Abhijit Manik** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Survey of Microbial Enzymes in soil, Water and plant Microenvirnment" presents her bonafide work in B.Sc- III of the academic year 2021-2022

SSNalawade

Miss. S.S.Nalawade
PROJECT SUPERVISOR

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Chothe Sushen Sanjay** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Studies on Polyphospate Accumulating Bacteria Isolated from chicken Shit" presents her bonafide work in B.Sc-III of the academic year 2021-2022

Miss. S.A.Shikalgar
PROJECT SUPERVISOR

EXAMINAR

SSNalawade
CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



Roll No: 3711

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Kadam Bhagyashri Bharat** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2021-2022

Mrs. S.S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology



Roll No: 3712

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Pawar Vaishnavi Vishwanath** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2021-2022

Mr. A.K. Kanase

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No:3713

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Pisal Aishwarya Adhikarao** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mr. S.S.Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No:3714

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Shelake Gayatri Dadasaheb** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mr. S.S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3715

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Tirmare Vaishanavi Jeevankumar** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Mr. A.K. Kanase

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3716

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Torane Akanksha Ramaji** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2021-2022

Mr. A.K. Kanase

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3717

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Yadav Shradha Subhash** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2021-2022

S. Shikalgar

Miss. S .A . Shikalgar

Project Guide

Mulape

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3718

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss.Hatte Sayali Dashrat** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2021-2022

Miss. S .A . Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3719

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Gaikwad Lata Mangesh** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss . S.A.Shikalgar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3720

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Hake Abhijit Manik** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2021-2022

Mrs. S.S.Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3721

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Chothe Sushen Sanjay** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2020-2021

Miss. S.A.Shikalagar

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No : 5001

Date : 06/07/2022

Exam No : 1039

Shri Shivaji Education Society

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE KARAD.

DEPARTMENT OF MICROBIOLOGY

CERTIFICATE

This is to certify that Miss. Ambardekar Nutan Bajarang has satisfactory carried out the required training work prescribed by the Shivaji University Kolhapur in PRACTICAL COURSE VII : Industrial Training Work for the M.Sc II (Semester-IV) Microbiology Course and her TRAINING REPORT at "Fatteshingrao Naik (Appa) saha. Duth utpa . Sangh LTD Shirala . Represent her bonafide work in the M.Sc II (Semester- IV) of academic year 2021-2022

Teachers-in-charge Examiner Sign Head,
DEPARTMENT OF MICROBIOLOGY
Department of Microbiology

Yashwantrao Chavan College of Science Karad

Reg. No. SAN/DFG/493/77 Dated : 1-8-1977

FATTESINGRAO NAIK (APPA) SAHAKARI DUDH UTPADAK SANGH LTD;

फत्तेसिंगराव नाईक (आप्पा) सह. दूध उत्पादक संघ लि; शिराळा.

Tal-Shirala,Dist-Sangli. (Maharashtra), Mob.No.- (Office- 9021880813/8446250301, Mrkt.- 9021874186)

ता. शिराळा, जि. सांगली. (महाराष्ट्र) Email : prachiteedudh@ymail.com

Ref. NO| T.O| 961 |2021-22

Date : 25 / 2 / 2022

Certificate

This is certify that **Miss. Nutan Bajarang Ambardekar** is a student of M.Sc Part –II (Microbiology) from **Yashwantrao Chavan College of Science, Karad.** She has completed training work satisfactory in our Quality Control Department with the subject of **"Production Process and Quality Control"** from Date 20th Jan.2022 to 21th Feb.2022.

This certificate is issued from her own request.

Managing Director
Fattesingrao Naik(Appa)Sah.
Dudh Utp. Sangh Ltd Shirala

ROLL NO: 5002 DATE:

EXAM SEAT NO: PRN

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTICATE

This is to certify that Mr. **Bajbale Sourabh Mohan** has satisfactory carried out the required industrial training prescribed by Shivaji University Kolhapur in PRACTICAL COURSE– VIII : Industrial training for M.Sc. II (semester – IV) microbiology course and his industrial training report entitled **"INDUSTRIAL TRAINING AT THORAT MILK AND MILK PRODUCTS, PVT. LTD. MIRAJ."** represent his bonafide work in the M.Sc. II (Semester IV) of academic year 2021-22.

Teacher in-charge Examiner Head of department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

Reg. No. MPA - 68216

Date : 19/12/2007

Panchganga

M/s. THORAT MILK & MILK PRODUCTS

Ref. No. :

Date : 06/02/2022

To Whomsoever It May Concern

Cartificate

This is certify that Mr.BAJBALE SOURABH MOHAN (ROLL NO. 5002) Student Of Yashwantrao Chavan College Of Science,Karad. MSc-II Microbiology has completed Training in Microbiological Laborotory section Of our Organisation from 15/01/2022 TO 04/02/2022 During the training he was found sincere and hardworking.

We wish him all the success in future and best luck.

For M/s. Thorat Milk & Milk Products

Authorised Signatory

MUMBAI Off. -
Shop No. 5/6, New Golden Next Road, Sutarwadi, Jay Mahadev Palace, Near Indralok, Bhaindar (E) Mumbai - Ph. : (022) 28047987
Cell : 9373501599
E-mail - thoratmilkproducts@yahoo.in
thoratmilkproducts@gmail.com

PUNE Off. -
Survey No. 33/A, Flat No. 101, Shri yog Apartment, Katraj-Pune - 411 046
Cell : 7083825599,
E-mail - thoratmilkproducts@yahoo.in
thoratmilkproducts@gmail.com

MIRAJ PLANT -
Plot No.D-77/A, Miraj M.I.D.C. Tal - Miraj
Dist.Sangli, Miraj - 416 410 Tel. : (0233) 2644474
Cell : 9859111777
Email : thoratmilkproducts@yahoo.in
thoratmilkproducts@gmail.com

Roll No. :- 5003

Exam No. :- 1041

Date:- 6-7-2022

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Rohini Suresh Bandgar has satisfactory carried out the required industrial training prescribed by Shivaji University, Kolhapur in PRACTICAL COURSE – VIII : Industrial training for M.Sc. II (semester –IV) microbiology course and her industrial training report in entitled "INDUSTRIAL TRAINING AT S.G. PHYTOPHARMA PVT. LTD" represent her bonafide work in the M.Sc. II(Semester IV) of academic year 2021-22.

Teacher incharge

Examiner

Head

Deparment of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Roll No. :- 5003 Date:- 6-7-2022

Exam No. :- 1041

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Rohini Suresh Bandgar has satisfactory carried out the required industrial training prescribed by Shivaji University, Kolhapur in PRACTICAL COURSE – VIII : Industrial training for M.Sc. II (semester –IV) microbiology course and her industrial training report in entitled "INDUSTRIAL TRAINING AT S.G. PHYTOPHARMA PVT. LTD" represent her bonafide work in the M.Sc. II(Semester IV) of academic year 2021-22.

Teacher incharge

Examiner

Head

Deparment of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

CIN NO. U24239PN2000PTC015557

SG Phyto Pharma Pvt ltd

Factory :
B-53/D - 21 M.I.D.C.
Gokul Shirgaon,
Kolhapur 416 237
Maharashtra, India

Fact. B-53 :
Tele Fax : 0231 - 2672528
Mobile : +91 7875444014
Fact D-21 : 0231 2671454
Mobile : +91 7875444012



Date : 12-02-2022

CERTIFICATE

This is certify that Ms. Rohini Suresh Bandgar, Yashwantrao Chavan College of Science, Karad has completed Industrial Training in our both units (B53/D21) in production & QAD Lab from 28-01-0022 to 11-02-2022 satisfactorily.

For,
S G PHYTO PHARMA PVT. LTD.

(M. S. Gune)
Executive Director

Roll No- 5005

Exam No -

Date - 06/07/2022

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is certify that **MISS. CHAVAN SHUBHANGI VILAS** has satisfactory carried out the required training work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII : Training Work for the M. Sc. part –II (semester –IV) Microbiology course and her TRAINING REPORT entitled "**UNICHEM LABORATORIES LIMITED** " represented her bonafide work in the M.Sc. Part –II (semester –IV) of academic year 2021- 2022

Teacher In charge

Examiner

Head,
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★

UNICHEM
LABORATORIES LTD.

KHHRA/RD/002

14th April 2022

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Miss. Shubhangi Chavan has completed her one week internship training in our organization from 24th January 2022 to 31st January 2022.

During her training span, she was found to be sincere & hardworking.

We wish her all the best for her future endeavors.

For UNICHEM LABORATORIES LIMITED

Desai
14/04/22

Abhaysinh Desai
Head - HRA

ROLL NO. : 5006

DATE: 5/07/22

EXAM NO.: 01037

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Miss. Deshmukh Anjali Adhikrao has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in " MAHAKALI MILK AND MILK PRODUCTS PVT.LTD " represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Prof. K.A. Sutar
Project Supervisor

Examinar

Dr. J.U. Patil
Head,
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * Karad *

Mahakali Milk Processors Pvt Ltd.

Quality Milk & Milk Products

Date : 20/02/2022

To Whomsoever It May Concern

Certificate

This is certify that **Miss Deshmukh Anjali Adhikrao (Roll No. 5006)** Student of Yashwantrao Chavan College of Science, Karad, MSc-II Microbiology has completed Training in Microbiological Laboratory section of our Organisation from **21/01/2022 to 20/02/2022.** During the training she was found sincere and hardworking.

We wish her all the success in future and best luck.

MANAGER
MAHAKALI MILK PROCESSORS PVT. LTD.

Vijaynagar, Post. Supane, Tal. Karad, Dist. Satara. 415 114
Ph. : (02164) R. 255214, O. 255177, Fax : 225215
E.Mail : mahakalimilk77@gmail.com

ROLL NO. : 5007 DATE: 6/7/2022

EXAM NO.: 1045

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that MISS. RUTUJA SUDHIR DHEMARE has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in "Sahyadri Sakhar Karkhana Yaswantnagar Distillery" represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Teacher Incharge

Examiner

Dr. J.U. Patil Sir
Head
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★



बहुजन हिताय । बहुजन सुखाय ।।

SAHYADRI

SAHAKARI SAKHAR KARKHANA LTD.,

YESHWANTNAGAR - 415 115, TAL. KARAD, DIST. SATARA
(MAHARASHTRA)



LABOUR(24)/2021-22/ 6462 Date : 15/02/2022

CERTIFICATE

This is to certify that **Miss.Rutuja Sudhir Dhemare** M.Sc. II(Microbiology) student of **Yashwantrao Chavan College of Science, Karad** has completed Industrial Training in the "Distillery Section" in our Karkhana from 19 January 2022 to 08 February 2022.

This Certificate is issued as per her request.

MANAGING DIRECTOR,
Sahyadri Sah. Sakhar Karkhana Limited,

☎ : Factory : 8956015501, 8956015502, 8956015503, 8956015504, 8956015505
E-mail : sahyadrisugar@gmail.com, contact@sahyadrisakhar.com Web : www.sahyadrisakhar.com

ROLL NO : 5008

DATE: 06/07/2022

EXAM SEAT NO: -

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTICATE

This is to certify that Mr. **MAYUR BHAGWAN GHOLAP** has satisfactory carried out the required industrial training prescribed by Shivaji University Kolhapur in PRACTICAL COURSE– VIII : Industrial training for M.Sc. II (semester –IV) microbiology course and his industrial training report entitled **"Viraj Alcohols & Allied Industries Ltd."** represent his bonafide work in the M.Sc. II (Semester IV) of academic year 2021-22

Teacher in-Charge

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY
Head of Department

Yashwantrao Chavan College of Science ★ Karad ★

VIRAJ Alcohols & Allied Industries Ltd.

VAAIL/ 07 /717 / 2021-22 Date: 25th Feb.2022

CERTIFICATE

This is to certify that, Mr. Mayur Bhagawan Gholap (M.Sc.II-Microbiology), the student of Yashwantrao Chavan College of Science, Karad, Dist. - Satara has successfully completed **" In plant Training "** from 21st January 2022 to 10th February 2022 in our laboratory. He was sincere & hard working.

We wish him all the best.

VIRAJ ALCOHOL & ALLIED INDUSTRIES LTD. KAPARI, TAL.-SHIRALA

CINU 15511 PN 2002 PTC 016762 DT. 18/2/2002 DIST. SANGLI

HR

General Manager

Viraj Alcohols & Allied Industries Ltd., (CIN-U15511 PN2002PLCO016762) At/post & Tal. Shirala, Dist. Sangli, Maharashtra -415408.
Telefax : +91 2345 272799, Phone : 9766722000, 9766723000, +91 2345 272799,
website : www.virajindustries.in, email : virajalcohols@gmail.com

Roll No. :- 5010 **Date:-** 07/07/2022

Exam No. :-

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Pratiksha Ganesh Kamble has satisfactory carried out the required industrial training prescribed by Shivaji University, Kolhapur in PRACTICAL COURSE – VIII : Industrial training for M.Sc. II (semester –IV) microbiology course and her industrial training report in entitled "INDUSTRIAL TRAINING AT S.G. PHYTOPHARMA PVT. LTD" represent her bonafide work in the M.Sc. II(Semester IV) of academic year 2021-22.

Examiner

Teacher

Head of Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

CIN NO U24239PN2000PTC015557

SG Phyto Pharma Pvt ltd

Factory :
B-53/D - 21 M I D C
Gokul Shirgaon
Kolhapur 416 237
Maharashtra. India

Fact. B-53 :
Tele Fax 0231 - 2672528
Mobile +91 7875444014
Fact D-21 : 0231 2671454
Mobile +91 7875444012



Date : 12-02-2022

CERTIFICATE

This is certify that Ms. Pratiksha Ganesh Kamble, Yashwantrao Chavan College of Science, Karad has completed Industrial Training in our both units (B53/D21) in production & QAD Lab from 28-01-0022 to 11-02-2022 satisfactorily.

For,
S G PHYTO PHARMA PVT. LTD.

(M. S. Gune)
Executive Director

Regd. Office : 532/1, Nilgiri Apartment, Plot No. 3, Rajendranagar Ring Road, Kolhapur 416 004 MS India 0231 - 2691520 Fax : 0231 - 2691665 Mobile : +91 7875444011
Email : sgphyto@gmail.com info@sgphyto.com Website : www.sgphyto.com

ROLL NO:- 5012
EXAM NO:-

DATE 06/07/2022

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Miss .Koli Dipali Dipak has satisfactory carried out the required project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VII: Industrial Training for the M.sc Part II (semester-IV) Microbiology course and her Industrial Training At **"Swabhimani Dudh Sangh, Udagao, Jayasingpur."** Represents her bonafide work in the M.sc.part II (Semester-IV) of academic year 2021-2022.

Teacher incharge Examiner.

Head

Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★

Swabhimani Agro Products Producer Co. Ltd.,
Regd. Off. Gat No. 1021, Kalammawadi Estate Road, UDGAON
Tal. Shirol, Dist. Kolhapur, Ph. (02322) 222118, 222127, 7722052391
E-mail : swabhimaniagro@gmail.com
www.swabhimaniagro.com

SAPPCL/480/ 2021-22 **Date :23.03.2022**

EXPERIENCE CERTIFICATE

This is to certify that Miss. Dipali Dipak Koli was working with us as a "TRAINEE MICROBIOLOGY " in our main Dairy processing & manufacturing plant at Shirol from 28.01.2022 to 22.03.2022.

To the best of my knowledge she is hard worker, sincere and bears a good moral character. We wish her success in future.

This certificate is issued on her own request.

FOR SWABHIMANI AGRO PRODUCTS PRODUCER CO.LTD.

ADMINISTRATIVE OFFICER

ROLL NO: 5013 DATE : 06/07/2022

EXAM NO: 1057

Shri Shivaji Education Society, Karad

Board for Higher Education

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Dipali Shashikant Koli** has carried out the required industrial training work prescribed by the Shivaji University, Kolhapur in practical course VII: Industrial training for M. Sc. Part II (semester) Microbiology course and her industrial training at "Bharti Vidyapeeth University, Grapes Processing and Research Institute's Mother Unit Winery Ltd.," Palus.

Project supervisor Examiner sign

HEAD
DEPARTMENT OF MICROBIOLOGY
(Dept. of Microbiology.)

Yashwantrao Chavan College of Science ★ Karad ★

FOUNDER : CHANCELLOR
Hon. Dr. Patangrao Kadam
M.A., LL.B., Ph.D.

Phone (Pune) : 020-24379013
(Palus) 02346 - Institute - 228992
Mother Unit Winery - (02346) 229006 / 228414

BHARATI VIDYAPEETH UNIVERSITY
(Established u/s 3 of the UGC Act. 1956)

GRAPE PROCESSING & RESEARCH INSTITUTE

Plot No. Amenity-2, Mother Unit Winery, Krishna Wine Park,
Sandgewadi M.I.D.C. A/p. Tal. Palus - 416 310, Dist. Sangli (Maharashtra)

Ref.: BVU/GPRI/ 482 /2021 - 2022
Date : 17 / 02 /2022

CERTIFICATE

This is to certify that,**Miss. Dipali Shashikant Koli** a student of **General microbiology,Yashwantrao Chavan College of Science Karad** ,Has been completed the training Cource of 30 days form 17/01/2022 to 16/02/2022 Subject Fermentation microbiology And is awarded this certificate by'Mother Unit' Winery Palus .We found him very sincere and hardworking during his project study. We wish him very success in future endeavors.

In charge,
Grape processing and research institute, palus

incharge
Grape Processing & Research Institute
Palus, Dist. Sangli

ROLL NO. : 5014 **DATE:** 06/07/2022

EXAM NO.:

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that MR.SAURABH VIJAY KOLI has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in "Sahyadri Sakhar Karkhana Yaswantnagar Distillery" represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Dr. J.U. Patil Sir
Head
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Examiner

Yashwantrao Chavan College of Science ★ Karad ★

Teacher Incharge



SAHYADRI
SAHAKARI SAKHAR KARKHANA LTD.,
YESHWANTNAGAR - 415 115, TAL. KARAD, DIST. SATARA
(MAHARASHTRA)



LABOUR(24)/2021-22/ 6464 Date : 15/02/2022

CERTIFICATE

This is to certify that **Mr.Saurabh Vijay Koli** - M Sc. II(Microbiology) student of **Yashwantrao Chavan College of Science, Karad** has completed Industrial Training in the "Distillery Section" in our Karkhana from 19 January 2022 to 08 February 2022.

This Certificate is issued as per his request.

MANAGING DIRECTOR,
Sahyadri Sah. Sakhar Karkhana Limited.

☎ : Factory : 8956015501, 8956015502, 8956015503, 8956015504, 8956015505
E-mail : sahyadrisugar@gmail.com, contact@sahyadrisakhar.com Web : www.sahyadrisakhar.com

Roll No. : 5016

Exam No. : 1062

Date : 6-7-2022

SHRI SHIVAJI EDUCATION SOCIETY'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Landge Ankita Dinkar** has satisfactorily carried out the required, Industrial Training work prescribed by the **'SHIVAJI UNIVERSITY, KOLHAPUR'** in semester IV, Microbiology Course M.Sc.-II. Her Training Report on, **"PRODUCTION PROCESS AND QUALITY CONTROL"** has concluded under reference of **"SYMBIOSIS COOPERATIVE PHARMACEUTICAL LTD. KUPWAD MIDC, TAL. MIRAJ, DIST. SANGLI"** Represents her bonafide work in the M.Sc. Part II (Sem. IV) of academic year 2021-2022.

Teacher in-charge

6/7/2022

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY
Department of Microbiology

Yashwantrao Chavan College of Science ★ Karad ★

SYMBIOSIS
CO-OP. PHARMACEUTICALS LTD. SANGLI.

SYMBIOSIS
Manufacturers of
Liquid orals & dry syrup

Ref. No.:- SYM/010/22

Date: -21/02/22

To Whomsoever It May Concern

This is to certify that ***Miss. Ankita Dinkar Landge*** has undergone implant training in our firm from 17/01/22 to 21/02/22.

During this period she has displayed keen sense of Loyalty, Intelligence & Sincerity.

We wish her all the success in future.

Authorized Signature

Symbiosis Co. Op. Pharmaceuticals Ltd. Sangli.

Plot No. J-89, M.I.D.C. Kupwad Block, Sangli, Maharashtra - 416 436 • Ph. No. (0233) 2645482, 2645065, 2323001
Email : symbiosisp@rediffmail.com, symbiosis_office@rediffmail.com, symoffice@symbiosisco.in

ROLL NO. :-5017
Exam No. :- 1063

DATE: 6/7/22

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Mali Sushmita Vijay has satisfactory carried out the required Industrial Training prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training for the M. Sc. Part – II (Semester – IV) Microbiology Course and her Industrial Training At "Hutatma sahaakari dudh utpadak sangh ltd.,walwa" represents her bonafide work in the M. Sc. Part II (Semester – IV) of academic year 2021-2022.

Teacher in charge

6/7/2022
Examiner Sign

HEAD
DEPARTMENT OF MICROBIOLOGY
Head
Department of microbiology

Yashwantrao Chavan College of Science ★ Karad ★

* बहुराज्यीय मान्यताप्राप्त * रजि. नं. एमएसडीएस/सीआर/६७/९७, दि. २३/०७/१९९७

हुतात्मा सहकारी दूध उत्पादक संघ मर्यादित, वाळवा.

हुतात्मा दूध

मुख्य कार्यालय : वाळवा - ४१६ ३१३ जि. सांगली (महाराष्ट्र)

फोन नं. : (०२३४२) २६७८०८, २६७५४४, फॅक्स : २६८४०८,

अथणी : (०८२८९) २५१८०८ मोबा. : ९९६०५९७७४४, ९९६०५९७७३६

Email : 1) hutatmadudh@gmail.com 2) hutatma_dudh@yahoo.co.in

HutatmaDudh/ 62 /2021-22 Date: 09/03/2022

TO WHOM IT MAY CONCERN

This is to Certify that **Miss, Sushmita Vijay Mali** a student of **Yashwantrao Chavan College Of Science, Vidyanagar Karad** has completed Internship programme for a period of One month's (**24-01-2022 to 25-02-2022**) at **HutatmaSah.DudhUtpadakSangh Ltd Walwa.** During the period of her internship programme with us she was found punctual, hardworking, and Inquisitive.

We wish her every success in life..

HUTATMA SAHKARI DUDH UTPADAK SANGH MARYADIT WALWA
Regi. No. MSCS/CR/67/97 Dt. 23/7/1997 Tal Walwa, Dist Sangli. (M.S.)

HR & Administration
Hutatmasah.DudhUtapadakSangh Ltd; Walwa, Tal-Walwa,
Dist- Sangli (MS)

Roll No:- 5018

Exam Seat No. :- 1065 **PRN:-** 2020063122

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTICATE

This is to certify that Mr. Ayanali Dastagir Mujawar has satisfactory carried out the required industrial training prescribed by Shivaji University Kolhapur in PRACTICAL COURSE – VIII : Industrial training for M.Sc. II (semester –IV) microbiology course and his industrial training report entitled **"INDUSTRIAL TRAINING AT MISTAIR HEALTH AND HYGIENE, PVT. LTD."** represent his bonafide work in the M.Sc. II (Semester IV) of academic year 2021-22

8/7/2022

HEAD
DEPARTMENT OF MICROBIOLOGY

Teacher Incharge Examiner Head of Department

Yashwantrao Chavan College of Science ★ Karad ★

Factory
Plot No.: 3,
M.I.D.C., SHIROLI, KOLHAPUR - 416 122.
TEL : 0230 - 2469187, 2468984, 2469351
Email : admin@mistair.net

MISTAIR
HEALTH & HYGIENE
PVT. LTD.

Certificate of Completion

This is to certify that Mr. AYANALI DASTAGIR MUJAWAR, a student of M.Sc. II (Micro.), Yashawantrao Chavan College of Science Karad, has successfully completed training programme from 27th JAN 2022 to 19th FEB 2022, at Mistair Health & Hygiene Pvt. Ltd., Kolhapur.

During the period of his training programme with us he was found punctual, hardworking & inquisitive.

We wish him very Sucesss in Life.

MISTAIR HEALTH & HYGIENE PVT. LTD. SHIROLI (PULACHI)

09/03/22

MISTAIR HEALTH & HYGIENE PVT. LTD.
Kolhapur.

Roll No. : 5019
Exam No : 1066

Date : 6/7/22

SHRI SHIVAJI EDUCATION SOCIETY'S YASHWANTRAO CHAVN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Mulla Muskan Naushad** has satisfactorily carried out the required, Industrial Training work prescribed by the SHIVAJI UNIVERSITY, KOLHAPUR, IN semester IV, Microbiology Course M.Sc – II. Her Training Report on PRODUCTION PROCESS AND QUALITY CONTROL' has concluded under reference of "HUTATMA SAHAKART . DUDH UTPADAKT SANGH LTD . WALWA". Represents her bonafide work in the M.Sc. Part II (sem IV) of academic . 2021-2022 yea

Project Supervisor

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY
Head
Department of Microbiology

Yashwantrao Chavan College of Science ★ Karad ★

हुतात्मा सहकारी दूध उत्पादक संघ मर्यादित, वाळवा.

मुख्य कार्यालय : वाळवा - ४९६ ३९३ जि. सांगली (महाराष्ट्र)

फोन नं. (०२३४२) २६७८०८, २६७१४४, फॅक्स : २६८४०८,

अहमदी : (०८२८९) २५९८०८ मोबा. : ९९६०५९७७४४, ९९६०५९७७३६

Email : 1) hutatmadudh@gmail.com 2) hutatma_dudh@yahoo.co.in

HutatmaDudh/ /2021-22

Date: 09/03/2022

TO WHOM IT MAY CONCERN

This is to Certify that **Miss. Muskan Naushad Mulla** a student of **Yashwantrao Chavan College Of Science, Vidyanagar Karad** has completed Internship programme for a period of One month's (**24-01-2022 to 25-02-2022**) at **HutatmaSah.DudhUtpadakSangh Ltd Walwa**. During the period of her internship programme with us she was found punctual, hardworking, and Inquisitive.

We wish her every success in life..

HUTATMA SAHA.-KARI DUDH UTPADAK SANGH MARYADIT WALWA
Regi. No MSCS/CR/67/97 Dt. 23/7/1997 Tal Walwa, Dist Sangli. (M.S.)

HR & Administration
Hutatmasah.DudhUtapadakSangh Ltd; Walwa, Tal-Walwa, Dist- Sangli (MS)

Roll No. :- 5020 **Date:-** 6-7-2022

Exam No. :- 1069

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Aarti Pandurang Patil has satisfactory carried out the required industrial training prescribed by Shivaji University, Kolhapur in PRACTICAL COURSE – VIII : Industrial training for M.Sc. II (semester – IV) microbiology course and her industrial training report in entitled "INDUSTRIAL TRAINING AT S.G. PHYTOPHARMA PVT. LTD" represent her bonafide work in the M.Sc. II(Semester IV) of academic year 2021-22.

Teacher incharge

Examier

Head of Deparment of Microbiology

Yashwantrao Chavan ★ Karad ★

U24239PN2000PTC015557

SG Phyto Pharma Pvt ltd

Factory :
B-53/D - 21 M I D C
Gokul Shirgaon,
Kolhapur 416 237
Maharashtra, India

Fact. B-53 :
Tele Fax : 0231 - 2672528
Mobile : +91 7875444014
Fact D-21 : 0231 2671454
Mobile : +91 7875444012



Date : 12-02-2022

CERTIFICATE

This is certify that Ms. Aarti Pandurang Patil, Yashwantrao Chavan College of Science, Karad has completed Industrial Training in our both units (B53/D21) in production & QAD Lab from 28-01-0022 to 11-02-2022 satisfactorily.

For,
S G PHYTO PHARMA PVT. LTD.

(M. S. Gune)
Executive Director

Regd. Office : 532/1, Nilgiri Apartment, Plot No. 3, Rajendranagar Ring Road, Kolhapur 416 004 MS India 0231 - 2691520 Fax : 0231 - 2691665 Mobile : +91 7875444011
Email : sgphyto@gmail.com info@sgphyto.com Website : www.sgphyto.com

Roll No.- 5021

Exam No. 1071

Date: 6-7-22

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DAPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Patil Kashmira Komal, has satisfactory carried out the required Industrial Training prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training for the M.Sc. Part-II(Semester-IV)Microbiology Course and her Industrial Training at "HITECH LAB SANGALI" represents her bonafide work in the M.Sc. Part -II (Semester-IV) of academic year 2021-2022.

Teacher incharge **Examiners Sign** **Head Department of Microbiology**

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★

HIGH-TECH
LAB & CONSULTANCY

- Soil & Particle Testing
- Water & Waste Water Testing
- Food, Feed & Fertilizers Testing
- Biofertilizers & Earthworm Composting
- Suppliers of Glasswares & Chemicals
- Microbiological & Agricultural Product Testing
- Lab set-up & Training
- Packaged drinking water
- E.T.P. S.T.P. M.G.F. A.C.F. S.F.R.O. D.M. Plant
- Rain Water Harvesting

ISO 9001 : 2015 CERTIFIED

Ref : HCL / ADMIN / TC / 048 Date : 18 / 06 / 2022

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Miss. Kashmira Komal Patil,

has successfully completed

"Laboratory Management & Basic Analysis Of Soil, Water, R&D "

Conducted from 30 / 01 / 2022 to 06 / 03 / 2022

She is familiar with Good Laboratory Practices (GLP) and analysis conducted on Atomic Absorption Spectrophotometer (AAS), Visible Spectrophotometer, Flame Photometer and other routine laboratory instruments.

Mr. Satish Gurav

High-tech Labs And Consultancy

"Rajbhushan" Bunglow, 2nd Floor, Near Anantganga Hall, Dr. Ambedkar Road, SANGLI. 416 416 Maharashtra,India
Office : 7709273012 Mob.: 9921534602, 9270597622 E-mail : hcllabcon@gmail.com www.hitechlab.org

EXAM SEAT NO : 1068

DATE : 8/07/2022

ROLL NO : 5022

Shri. Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTICATE

This is to certify that **Mr. NITESH BHAIRU PATIL** has satisfactory carried out the required industrial training prescribed by Shivaji University , Kolhapur in PRACTICAL COURSE– VIII : Industrial training for M.Sc. II (semester –IV) General Microbiology course and his industrial training report entitled **" INDUSTRIAL TRAINING AT APPASAHEB NALAWADE GADHINGLAJ TALUKA SAHAKARI SAKHAR KARKHANA LTD ,HARALI "** represent his bonafide work in the M.Sc. II (Semester IV) of academic year 2021-22

8/7/2022

HEAD
DEPARTMENT OF MICROBIOLOGY

Teacher incharge **Examiner** **Head of Department**

Yashwantrao Chavan College of Science ★ Karad ★

Gram : Godsakhar, Gadhinglaj
☎ : (02327) 250317 - 18 - 19
Kolhapur Office : (0231) 2650340
Fax : (02327) 250314
E-mail : gtsskltd@rediffmail.com

APPASAHEB NALAWADE GADHINGLAJ TALUKA
SAHAKARI SAKHAR KARKHANA LTD., HARALI.
TAL. GADHINGLAJ - 416 502, DIST. KOLHAPUR
(MAHARASHTRA)

Ref. : Adm/Labour/ 1064 /2021-22 Date : 31 /01/2022

CERTIFICATE

This is to certify that, **Mr. Nitesh Bhairu Patil** residence of Shippur turf Nesari, Tal. Gadhinglaj, Dist. Kolhapur a student of Yashwantrao Chavan College of science, Karad [Msc-II] has attended to our organization and collected the necessary information regarding his project report on " **In Plant Industrial Training**" from 1/01/2022 to 29/01/2022 for 30 days.

This certificate is being issued as per his request application for the purpose of education fulfillment only.

Yours faithfully,

Managing Director
Appasaheb Nalawade GTSSK Ltd., Harali,
Tal. Gadhinglaj, Dist. Kolhapur.

Roll No. :- 5023 **Date:-** 6/07/2022

Exam No. :- 1074

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Snehal Sudhakar Patil has satisfactory carried out the required industrial training prescribed by Shivaji University, Kolhapur in PRACTICAL COURSE – VIII : Industrial training for M.Sc. II (semester – IV) microbiology course and her industrial training report in entitled "INDUSTRIAL TRAINING AT S.G. PHYTOPHARMA PVT. LTD" represent her bonafide work in the M.Sc. II(Semester IV) of academic year 2021-22.

Teacher incharge

Examiner

Head
DEPARTMENT OF MICROBIOLOGY
Deparment of Microbiology

Yashwantrao Chavan College of Science ★ Karad ★

NO. U24239PN2000PTC015557

SG Phyto Pharma Pvt ltd

Factory :
B-53/D - 21 M.I.D.C.
Gokul Shirgaon,
Kolhapur 416 237
Maharashtra, India

Fact. B-53 :
Tele Fax : 0231 - 2672528
Mobile : +91 7875444014
Fact D-21 : 0231 2671454
Mobile : +91 7875444012



Date : 12-02-2022

CERTIFICATE

This is certify that Ms. Snehal Sudhakar Patil, Yashwantrao Chavan College of Science, Karad has completed Industrial Training in our both units (B53/D21) in production & QAD Lab from 28-01-0022 to 11-02-2022 satisfactorily.

For,
S G PHYTO PHARMA PVT. LTD.

(M. S. Gune)
Executive Director

Regd. Office : 532/1, Nilgiri Apartment, Plot No. 3, Rajendranagar Ring Road, Kolhapur 416 004. MS. India 0231 - 2691520 Fax : 0231 - 2691665 Mobile : +91 7875444011
Email : sgphyto@gmail.com info@sgphyto.com Website : www.sgphyto.com

Roll No.:-5024

Exam Seat No.:-1077

Date: - 8/7/22.

Shri Shivaji Education Society's Karad, Board For Higher Education's

Yashwantrao Chavan College of Science, Karad.

Vidyanagar, Karad - 415124

CERTIFICATE

This is to certify that, Miss. Nilofar Ajij Shikalgar studying in M.Sc. II Roll No.5024 Department of Microbiology, Yashwantrao Chavan College of Science, Karad have been seen sincerely and successfully completed on job training at Ghodawat consumers Ltd. as prescribed by Shivaji University, Kolhapur during the academic year 2021-2022 and this report represents her bonafide work.

TEACHER IN-CHARGE

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY

HEAD OF DEPARTMENT

Yashwantrao Chavan College of Science * Karad *

Enhancing Lives Globally

GHODAWAT CONSUMER
SANJAY GHODAWAT GROUP

CIN : U15100PN2002PLC017370

Date: - 28.02.2022

Certificate

To Whomsoever It May Concern

This is to certify that **Miss. Nilofar Ajij Shikalgar** student of **"Yashwantrao Chavan College of Science, Karad "** M Sc. Part 2 Microbiology has completed successfully her training Program in Ghodawat Consumer Limited (Beverage Division)

She has satisfactorily carried out her academics project in our company with in a period from 20th Jan 2022 to 20th Feb 2022.

We wish her a bright and prospective career.

Ghodawat Consumer Limited

Authorized Signature

GHODAWAT CONSUMER LIMITED

GHODAWAT CONSUMER LIMITED
(Formerly known as Ghodawat Consumer Pvt. Ltd. and Ghodawat Foods International Pvt. Ltd.)
Registered Office : Plot No. 437, P. B. No.: 118 A/P. Chipri, Jaysingpur - 416101, Dist: Kolhapur, Maharashtra, India.
Corporate Office : One SGG, Plot No. 358, A/P. Majale, Sangli- Kolhapur Highway, Kolhapur - 416109
+91 230 2461111 info@ghodawat.com www.ghodawatconsumer.com
Factory : Gat No. 591, 457, 472, 470 A/P. Chipri, Tal. Shirol, Dist. Kolhapur, Maharashtra

ROLL NO. :-5025

DATE: 05/07/2022

Exam No:- 1038

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Aishwarya Sunil Amanagi has satisfactory carried out the required Industrial Training prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training for the M. Sc. Part - II (Semester - IV) Microbiology Course and her Industrial Training At "**Shree Chhatrapati Shahu Sahakari Sakhar Karkhana Ltd. Kagal**" represents her bonafide work in the M. Sc. Part II (Semester - IV) of academic year 2021-2022.

Project Supervisor

Examiner Sign

Head,
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY



Shree Chhatrapati Shahu
Sahakari Sakhar Karkhana Ltd., Kagal

H.R./07/6277/2021-2022

Date- 18/02/2022

-:CERTIFICATE:-

This is to certify that Miss. Aishwarya Sunil Amanagi a student of M.Sc. (Microbiology) II nd year, Yashwantrao Chavan College of Science, Karad has successfully completed Inplant Training from 18/01/2022 to 18/02/2022 in our Distillery Department.

Miss. Amanagi was found to be sincere and honest during Inplant Training. This certificate is issued on his request.

For Shri Chh. Shahu S.S.K.Ltd.,

J. A. CHAVAN
MANAGING DIRECTOR

"Shrimant Jaysingrao Ghatge Bhavan" Kagal 416 216 Dist - Kolhapur Phone No. (02325) 244211 to 244214
Fax No. - 244241 Kolhapur Office :- (0231) 2654450 E-mail : mail@shahusugar.com, Website - www.shahusugar.com
● I. T. PAN No. AAAAS1032M ● VAT TIN No. - 27270410837V ● CST TIN No. - 27270410837C ●
● G.S.T. No. 27AAAAS1032M1ZL ●

ISO 9001:2015
www.tuv.com
ID 9105020412

ROLL NO : 5026

EXAM SEAT NO: -

DATE: 7/7/2022

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTICATE

This is to certify that Mr. **SOMNATH PANDURANG BHOSALE** has satisfactory carried out the required industrial training prescribed by Shivaji University Kolhapur in PRACTICAL COURSE– VIII : Industrial training for M.Sc. II (semester –IV) microbiology course and his industrial training report entitled **"Viraj Alcohols & Allied Industries Ltd."** represent his bonafide work in the M.Sc. II (Semester IV) of academic year 2021-22

Teacher in-Charge

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY
Head of Department

Yashwantrao Chavan College of Science * Karad *

VIRAJ Alcohols & Allied Industries Ltd.

VAAIL/ 07 /718 / 2021-22 Date: 25th Feb.2022

CERTIFICATE

This is to certify that, Mr. Somnath Pandurang Bhosale (M.Sc.II - Microbiology), the student of Yashwantrao Chavan College of Science, Karad, Dist.- Satara has successfully completed **" In plant Training "** from 21st January 2022 to 10th February 2022 in our laboratory. He was sincere & hard working.

We wish him all the best.

VIRAJ ALCOHOL & ALLIED INDUSTRIES LTD. CIN-U 16511 PN 2002 PTC 016762 Dt. 18/2/2002 DIST. SANGLI KAPARI TAL.-SHIRALA

General Manager

Viraj Alcohols & Allied Industries Ltd , (CIN-U15511 PN2002PLCO016762) At/post & Tal. Shirala, Dist. Sangli, Maharashtra -415408.
Telefax : +91 2345 272799, Phone : 9766722000, 9766723000, +91 2345 272799,
website : www.virajindustries.in, email : virajalcohols@gmail.com

Roll No:- 5027 Date:- 06/07/2022

LABORATORY CERTIFICATE

This is to certify that Miss ROHINI VILAS GHORAPADE has satisfactorily carried out the required, Industrial Training work prescribed by the 'SHIVAJI UNIVERSITY, KOLHAPUR' in semester IV, Microbiology Course M.Sc.-II. Her Training Report on, "PRODUCTION PROCESS AND QUALITY CONTROL" has concluded under reference of "FISSION BIOSCIENCES LTD., VISHRAMBAUGH, SANGLI".

Represents her bonafide work in the M.Sc. Part II (Sem. IV) of academic year 2021-2022.

Dr. J. U. Patil
Head of Department, Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Prof. K. A. Sutar

Yashwantrao Chavan College of Science * Karad *

Mahakali Milk Processors Pvt Ltd.

Quality Milk & Milk Products

Date : 20/02/2022

To Whomsoever It May Concern

Certificate

This is certify that **Miss Ghorpade Rohini Vilas (Roll No.5027)** Student of Yashvantrao Chavan College Of Science, Karad, MSc- II Microbiology has Completed Training in Microbiology Laboratory section of our Organization from **1/02/2022 to 20/02/2022.** During the training she was found sincere and hardworking.

We wish her all the success in future and best luck .

MANAGER
MAHAKALI MILK PROCESSORS PVT. LTD.

Vijaynagar, Post. Supane, Tal. Karad, Dist. Satara. 415 114
Ph. : (02164) R. 255214, O. 255177, Fax : 225215
E.Mail : mahakalimilk77@gmail.com

Roll No.- 5028 Date: 06/07/2022

Exam No. 1049

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DAPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Jadhav Aishwarya Ananadrao, has satisfactory carried out the required Industrial Training prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training for the M.Sc. Part-II(Semester-IV)Microbiology Course and her Industrial Training at "HITECH LAB SANGALI" represents her bonafide work in the M.Sc. Part -II (Semester-IV) of academic year 2021-2022.

Teacher incharge **Examiners Sign** **Head, Department of Microbiology**

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★

HIGH-TECH LAB & CONSULTANCY

- Soil & Particle Testing
- Water & Waste Water Testing
- Food, Feed & Fertilizers Testing
- Molecularis & Earthworm Composting
- Suppliers of Glassware & Chemicals
- Microbiological & Agricultural Product Testing
- Lab set-up & Training
- Packaged drinking water
- E.T.P., S.T.P., M.G.F., A.C.F., S.F.R.O., D.M. Plant
- Rain Water Harvesting

ISO 9001 : 2015 CERTIFIED

Ref : HCL / ADMIN / TC / 044

Date : 02 / 03 / 2022

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Aishwarya Anandrao Jadhav

has successfully completed

"Laboratory Management & Basic Analysis Of Soil, Water,

Conducted from 10 / 01 / 2022 to 20 / 02 / 2022

he is familiar with Good Laboratory Practices (GLP) and analysis conducted on Atomic Absorption Spectrophotometer (AAS), Visible Spectrophotometer, Flame Photometer and other routine laboratory instruments.

Mr. Satish Gurav

High-tech Labs And Consultancy

Hightech Labs & Consultancy Sangli

REDMI NOTE 9 PRO MAX
64MP QUAD CAMERA

Jaibhushan" Bunglow, 2nd Floor, Near Anantganga Hall, Dr. Ambedkar Road, SANGLI 416 416 Maharashtra, India
... 9270597622 E-mail : hcllabcon@gmail.com www.hitechlab.org

Roll No. :- 5029 **Date:-** 6|7|2022

Exam No. :- 1050

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Amruta Ashok Jangam has satisfactory carried out the required industrial training prescribed by Shivaji University, Kolhapur in PRACTICAL COURSE – VIII : Industrial training for M.Sc. II (semester –IV) microbiology course and her industrial training report in entitled "INDUSTRIAL TRAINING AT S.G. PHYTOPHARMA PVT. LTD" represent her bonafide work in the M.Sc. II(Semester IV) of academic year 2021-22.

Teacher incharge

Examiner

Head
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

CIN NO U24239PN2000PTC015557

SG Phyto Pharma Pvt ltd

Factory :
B-53/D - 21 M.I.D.C.
Gokul Shirgaon,
Kolhapur 416 237
Maharashtra, India

Fact. B-53 :
Tele Fax : 0231 - 2672528
Mobile : +91 7875444014
Fact D-21 : 0231 2671454
Mobile : +91 7875444012



Date : 12-02-2022

CERTIFICATE

This is certify that Ms. Amruta Ashok Jangam, Yashwantrao Chavan College of Science, Karad has completed Industrial Training in our both units (B53/D21) in production & QAD Lab from 28-01-0022 to 11-02-2022 satisfactorily.

For,
S G PHYTO PHARMA PVT. LTD.

(M. S. Gune)
Executive Director

Regd. Office : 532/1, Nilgiri Apartment, Plot No. 3, Rajendranagar Ring Road, Kolhapur 416 004. MS. India 0231 - 2691520 Fax : 0231 - 2691665 Mobile : +91 7875444011
Email : sgphyto@gmail.com info@sgphyto.com Website : www.sgphyto.com

ROLL NO. :- 5030 DATE: 5-6-022

Exam No :- 1051

SHRI SHIVAJI EDUCATION SOCIETY'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING

CERTIFICATE

This is to certify that **Miss. Ankita Subhash Kamble** has satisfactory carried out the required Industrial Training prescribed by the **'SHIVAJI UNIVERSITY, KOLHAPUR' in** PRACTICAL COURSE **VIII**: Industrial Training for the M. Sc. Part - II (Semester - IV) Microbiology Course and her Industrial Training At **"SAMPATRAO DESHMUKH CO-OPERATIVE MILK UNION LTD. KADEPUR"** represents her bonafide work in the M. Sc. Part II (Semester - IV) of academic year 2021-2022.

Teacher incharge Examiner

Head

Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★

Sampatrao Deshmukh Co. Op. Milk Union Ltd. Kadepur

(Multi State)

Dongarai

Kadepur, Tal. Kadegaon, Dist. Sangli, 415 305, Maharashtra (India)
Tel. (02347) 245333
Email : sdcmu.kadepur@gmail.com

Ref. No./SDCMU/ 153/2022-23 Date: - 06/07/2022

CERTIFICATE

This is to certify that, **Miss. Kamble Ankita Subhash M.Sc. II year** student of microbiology from **Yashwantrao Chavan College of Science Karad** has successfully completed her Training regarding **"Production Process and Quality Control"** by **Sampatrao Deshmukh Co.Op. Milk Union Ltd., Kadepur. During period 27/01/2022 to 21/02/2022**

During the period of training work, she was found to be sincere, punctual and hard working.

We wish all the best for his future endeavors.

General Manager

Sampatrao Deshmukh Co-op. Milk Uni. Ltd. Kadepur
Tal. Kadegaon Dist. Sangli
M S C S/ CR/86/99 Dt. 06/04/1999

ROLL NO. : 5031 DATE: 07/07/2022

EXAM NO.:

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Mr. Kendre Shrinivas Vasantrao has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in " MAHAKALI MILK AND MILK PRODUCTS PVT.LTD " represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Teacher Incharge **Examiner** **Head**
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Mahakali Milk Processors Pvt Ltd.
Quality Milk & Milk Products

Date : 05/02/2022

To Whomsoever It May Concern

Certificate

This is certify that **Mr Kendre Shrinivas Vasantrao (Roll No. 5031)** Student of Yashwantrao Chavan College of Science, Karad, MSc-II Microbiology has completed Training in Microbiological Laboratory section of our Organisation from **14/01/2022 to 03/02/2022.** During the training he was found sincere and hardworking.

We wish him all the success in future and best luck.

MANAGER
MAHAKALI MILK PROCESSORS PVT. LTD.

Vijaynagar, Post. Supane, Tal. Karad, Dist. Satara. 415 114
Ph. : (02164) R. 255214, O. 255177, Fax : 225215
E.Mail : mahakalimilk77@gmail.com

ROLL NO. : 5032 **DATE:** 07/07/2022

EXAM NO.:

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Mr. Koligudde Vishal Rajendra has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in " MAHAKALI MILK AND MILK PRODUCTS PVT.LTD " represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Teacher Incharge **Examiner** **Head**
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★

Mahakali Milk Processors Pvt Ltd.
Quality Milk & Milk Products

Date : 05/02/2022

To Whomsoever It May Concern

Certificate

This is certify that **Mr Koligudde Vishal Rajendra (Roll No. 5032)** Student of Yashwantrao Chavan College of Science, Karad, MSc-II Microbiology has completed Training in Microbiological Laboratory section of our Organisation from **14/01/2022 to 03/02/2022.** During the training he was found sincere and hardworking.

We wish him all the success in future and best luck.

MANAGER
MAHAKALI MILK PROCESSORS PVT. LTD.

Vijaynagar, Post. Supane, Tal. Karad, Dist. Satara. 415 114
Ph. : (02164) R. 255214, O. 255177, Fax : 225215
E.Mail : mahakalimilk77@gmail.com

ROLL NO: 5033 **DATE:** 06/07/2022

EXAM NO: 1061

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBILOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Kumbhar Bhagyashri Balkrishna has satisfactory carried out the required industrial Training presented by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII:V Microbiology Course and her Industrial Training at Shree Chhatrapati Shahu Maharaj Sahakari Sakhar Karkhana LTD Kagal, Dist:Kolhapur an ISO Gul Factory

Examiner sign 8/7/2022

Head

HEAD
DEPARTMENT OF MICROBIOLOGY

Department of Microbiology

Teacher in charger.

Yashwantrao Chavan College of Science ★ Karad ★



Shree Chhatrapati Shahu
Sahakari Sakhar Karkhana Ltd., Kagal

H.R./07/6277/2021-2022

Date- 18/02/2022

-:CERTIFICATE:-

This is to certify that Miss. Bhagyashri Balkrishna Kumbhar a student of M.Sc. (Microbiology) II nd year, Yashwantrao Chavan College of Science, Karad has successfully completed Inplant Training from 18/01/2022 to 18/02/2022 in our Distillery Department.

Miss. KUmbhar was found to be sincere and honest during Inplant Training. This certificate is issued on his request.

For Shri Chh. Shahu S.S.K.Ltd.,

18/2

J. A. CHAVAN
MANAGING DIRECTOR

ROLL NO. : 5034 **DATE:**

EXAM NO.:

Shri Shivaji Education Society's
YASHWANTRAO CHAVAN COLLEGE OF SCIENCE
KARAD.
DEPARTMENT OF MICROBIOLOGY
LABORATORY CERTIFICATE

This is to certify that Mr. Kumbhar Swarup Pandurang has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in " KUMBHI KASARI SAHAKARI SAKHAR KARKHANA " represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Teacher In-Charge **Examiner**

Head
Department of Microbiology
HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * Karad *

Reg. No. : G-282 / 20-6-1960
Phone : (0231) 2444222 to 2444226
: (0231) 2444325, 2444326
Fax No. : (0231) 2444220
Kop. Off. : (0231) 2641903
visit us at www.kumbhisugar.com
E-mail : info@kumbhisugar.com

KUMBHI - KASARI
Sahakari Sakhar Karkhana Ltd., Kuditre

Tal. : Karvir, Dist. : Kolhapur - 416204 (Maharashtra)

REF.NO. LWO/34/2021-2022/ 2836 DATE - 11 FEB 2022

CERTIFICATE

This is to certify that Mr.Kumbhar Swarup Pandurang [Roll No 5034], student of MSc-(II) Microbiology of Yashvantrao Chavan College Of Science, Karad, has successfully completed training in Microbiological laboratory section of our organization from 20-01-2022 to 09-02-2022. During the training he has found sincere and hard working.

We wish him & all the best & success in future career.

FOR KUMBHI-KASARI S.S.K.LTD.,KUDITRE,

Patil

SECRETARY

Roll No. :- 5035

Date: - 6/7/22

Exam Seat No.:-1064

Shri Shivaji Education Society's Karad, Board For Higher Education's

Yashwantrao Chavan College of Science, Karad.

Vidyanagar, Karad - 415124

CERTIFICATE

This is to certify that, Miss. Mane Prajkta Anil studying in M.Sc. II Roll No.5024 Department of Microbiology, Yashwantrao Chavan College of Science, Karad have been seen sincerely and successfully completed on job training at Ghodawat consumers Ltd. as prescribed by Shivaji University, Kolhapur during the academic year 2021-2022 and this report represents her bonafide work.

08/07/2022

TEACHER IN-CHARGE

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY
HEAD OF DEPARTMENT

Yashwantrao Chavan College of Science * Karad *

Enhancing Lives Globally

GHODAWAT CONSUMER
SANJAY GHODAWAT GROUP

CIN : U15100PN2002PLC017370

Date: - 28.02.2022

Certificate

To Whomsoever It May Concern

This is to certify that **Miss. Prajakta Anil Mane** student of **"Yashwantrao Chavan College of Science, Karad "** M Sc. Part 2 Microbiology has completed successfully her training Program in Ghodawat Consumer Limited (Beverage Division)

She has satisfactorily carried out her academics project in our company with in a period from 20th Jan 2022 to 20th Feb 2022.

We wish her a bright and prospective career.

Ghodawat Consumer Limited

Authorized Signature

GHODAWAT CONSUMER LIMITED

GHODAWAT CONSUMER LIMITED
(Formerly known as Ghodawat Consumer Pvt. Ltd. and Ghodawat Foods International Pvt. Ltd.)
Registered Office : Plot No. 437, P. B. No. : 118 A/P. Chipri, Jaysingpur - 416101, Dist. Kolhapur, Maharashtra, India.
Corporate Office : One SGG, Plot No. 358, A/P. Majale, Sangli- Kolhapur Highway, Kolhapur - 416109.
+91 230 2461111 info@ghodawat.com www.ghodawatconsumer.com
Factory : Gat No. 594, 461, 462, 470 A/P. Chipri, Tal: Shirol, Dist : Kolhapur, Maharashtra, India - 416101

ROLL NO. : 5037 DATE: 05/07/22

EXAM NO.: 3867

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Mr. Pasare Akash Anil has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in " MAHAKALI MILK AND MILK PRODUCTS PVT.LTD " represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

8/7/2022

Teacher Incharge **Examiner** **Head**
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★

Mahakali Milk Processors Pvt Ltd.
Quality Milk & Milk Products

Date : 05/02/2022

To Whomsoever It May Concern

Certificate

This is certify that **Mr Pasare Aakash Anil (Roll No. 5037)** Student of Yashwantrao Chavan College of Science, Karad, MSc-II Microbiology has completed Training in Microbiological Laboratory section of our Organisation from **14/01/2022 to 03/02/2022.** During the training he was found sincere and hardworking.

We wish him all the success in future and best luck.

MANAGER
MAHAKALI MILK PROCESSORS PVT. LTD.

Vijaynagar, Post. Supane, Tal. Karad, Dist. Satara. 415 114
Ph. : (02164) R. 255214, O. 255177, Fax : 225215
E.Mail : mahakalimilk77@gmail.com

Roll No. :- 5038

Exam Seat No.:-1070

Date: - 06-07-2022

Shri Shivaji Education Society's Karad, Board For Higher Education's

Yashwantrao Chavan College of Science, Karad.

Vidyanagar, Karad - 415124

CERTIFICATE

This is to certify that, Miss. Patil Apurva Tanaji studying in M.Sc. II Roll No.5024 Department of Microbiology, Yashwantrao Chavan College of Science, Karad have been seen sincerely and successfully completed on job training at Ghodawat consumers Ltd. as prescribed by Shivaji University, Kolhapur during the academic year 2021-2022 and this report represents her bonafide work.

8/7/2022

Teacher Incharge

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY
HEAD OF DEPARTMENT

Yashwantrao Chavan College of Science ★ Karad ★

Enhancing Lives Globally

GHODAWAT CONSUMER
SANJAY GHODAWAT GROUP

CIN : U15100PN2002PLC017370

Date: - 28.02.2022

Certificate

To Whomsoever It May Concern

This is to certify that **Miss. Apurva Tanaji Patil** student of **"Yashwantrao Chavan College of Science, Karad "** M Sc. Part 2 Microbiology has completed successfully her training Program in Ghodawat Consumer Limited (Beverage Division)

She has satisfactorily carried out her academics project in our company with in a period from 20th Jan 2022 to 20th Feb 2022.

We wish her a bright and prospective career.

Ghodawat Consumer Limited

Authorized Signature

GHODAWAT CONSUMER LIMITED

GHODAWAT CONSUMER LIMITED
(Formerly known as Ghodawat Consumer Pvt. Ltd. and Ghodawat Foods International Pvt. Ltd.)
Registered Office : Plot No. 437, P. B. No.: 118 A/P. Chipri, Jaysingpur - 416101, Dist. Kolhapur, Maharashtra, India.
Corporate Office : One SGG, Plot No. 358, A/P. Majale, Sangli- Kolhapur Highway, Kolhapur - 416109
+91 230 2461111 info@ghodawat.com www.ghodawatconsumer.com
Factory : Gat No. 594, 461, 462, 470 A/P. Chipri, Tal: Shirol, Dist : Kolhapur, Maharashtra, India - 416101

Roll No. :- 5039 Date: - 6-7-22

Exam Seat No.:-1072

Shri Shivaji Education Society's Karad, Board For Higher Education's

Yashwantrao Chavan College of Science, Karad.

Vidyanagar, Karad - 415124

CERTIFICATE

This is to certify that, Miss. Patil Nishigandha Babaji studying in M.Sc. II Roll No.5024 Department of Microbiology, Yashwantrao Chavan College of Science, Karad have been seen sincerely and successfully completed on job training at Ghodawat consumers Ltd. as prescribed by Shivaji University, Kolhapur during the academic year 2021-2022 and this report represents her bonafide work.

8/7/2022

TEACHER IN-CHARGE EXAMINER HEAD DEPARTMENT OF MICROBIOLOGY

Enhancing Lives Globally

GHODAWAT CONSUMER
SANJAY GHODAWAT GROUP

CIN : U15100PN2002PLC017370

Date: - 28.02.2022

Certificate

To Whomsoever It May Concern

This is to certify that **Miss. Nishigandha Babaji Patil** student of "**Yashwantrao Chavan College of Science, Karad** " M Sc. Part 2 Microbiology has completed successfully her training Program in Ghodawat Consumer Limited (Beverage Division)

She has satisfa :torily carried out her academics project in our company with in a pei iod from 20th Jan 2022 to 20th Feb 2022.

We wish her a bright and prospective career.

Ghodawat Consumer Limited

Authorized Signature

GHODAWAT CONSUMER LIMITED

GHODAWAT CONSUMER LIMITED
(Formerly known as Ghodawat Consumer Pvt. Ltd. and Ghodawat Foods International Pvt. Ltd.)
Registered Office : Plot No. 437, P. B. No. : 118 A/P. Chipri, Jaysingpur - 416101, Dist. Kolhapur, Maharashtra, India.
Corporate Office : One SGG, Plot No. 358, A/P. Majale, Sangli- Kolhapur Highway, Kolhapur - 416109
+91 230 2461111 info@ghodawat.com www.ghodawatconsumer.com
Factory : Gat No. 594, 461, 462, 470 A/P. Chipri, Tal: Shirol, Dist : Kolhapur, Maharashtra, India - 416101

ROLL NO. : 5040 DATE: 06/07/2022

EXAM NO.:

Shri Shivaji Education Society's
YASHWANTRAO CHAVAN COLLEGE OF SCIENCE
KARAD.
DEPARTMENT OF MICROBIOLOGY
LABORATORY CERTIFICATE

This is to certify that Mr. Patil Satish Pandurang has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in " KUMBHI KASARI SAHAKARI SAKHAR KARKHANA " represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Teacher Incharge Examiner

Head,
Department of Microbiology
HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * Karad *

Reg. No. : G-282 / 20-6-1960
Phone : (0231) 2444222 to 2444226
: (0231) 2444325, 2444326
Fax No. : (0231) 2444220
Kop. Off. : (0231) 2641903
visit us at www.kumbhisugar.com
E-mail : info@kumbhisugar.com

KUMBHI - KASARI
Sahakari Sakhar Karkhana Ltd., Kuditre

Tal. : Karvir, Dist. : Kolhapur - 416204 (Maharashtra)

REF.NO. LWO/34/2021-2022/2837 DATE - 11 FEB 2022

CERTIFICATE

This is to certify that Mr.Patil Satish Pandurang [Roll No 5040], student of MSc-(II) Microbiology of Yashvantrao Chavan College Of Science, Karad, has successfully completed training in Microbiological laboratory section of our organization from 20-01-2022 to 09-02-2022. During the training he has found sincere and hard working.

We wish him & all the best & success in future career.

FOR KUMBHI-KASARI S.S.K.LTD.,KUDITRE,

SECRETARY

ROLL NO. : 5041

DATE: 06/07/2022

EXAM NO.:

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Mr. Patil Vinayak Chandrakant has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in " MAHAKALI MILK AND MILK PRODUCTS PVT.LTD " represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Teacher Incharge **Examiner** **Head**

Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★

Mahakali Milk Processors Pvt Ltd.

Quality Milk & Milk Products

Date : 05/02/2022

To Whomsoever It May Concern

Certificate

This is certify that **Mr Patil Vinayak Chandrakant (Roll No. 5041)** Student of Yashwantrao Chavan College of Science, Karad, MSc-II Microbiology has completed Training in Microbiological Laboratory section of our Organisation from **14/01/2022 to 03/02/2022.** During the training he was found sincere and hardworking.

We wish him all the success in future and best luck.

MANAGER
MAHAKALI MILK PROCESSORS PVT. LTD.

Vijaynagar, Post. Supane, Tal. Karad, Dist. Satara. 415 114
Ph. : (02164) R. 255214, O. 255177, Fax : 225215
E.Mail : mahakalimilk77@gmail.com

ROLL NO. : 5042 **DATE:** 07/07/2022

EXAM NO.:

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Mr. Pawar Santosh Vitthal has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in " MAHAKALI MILK AND MILK PRODUCTS PVT.LTD " represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Teacher Incharge **Examiner** **Head**
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★

Mahakali Milk Processors Pvt Ltd.
Quality Milk & Milk Products

Date : 05/02/2022

To Whomsoever It May Concern

Certificate

This is certify that **Mr Pawar Santosh Vitthal (Roll No. 5042)** Student of Yashwantrao Chavan College of Science, Karad, MSc-II Microbiology has completed Training in Microbiological Laboratory section of our Organisation from **14/01/2022 to 03/02/2022.** During the training he was found sincere and hardworking.

We wish him all the success in future and best luck.

MANAGER
MAHAKALI MILK PROCESSORS PVT. LTD.

Vijaynagar, Post. Supane, Tal. Karad, Dist. Satara. 415 114
Ph. : (02164) R. 255214, O. 255177, Fax : 225215
E.Mail : mahakalimilk77@gmail.com

Roll No. :- 5043

Date: - 8-7-2022

Exam Seat No.:-1078

Shri Shivaji Education Society's Karad, Board For Higher Education's

Yashwantrao Chavan College of Science, Karad.

Vidyanagar, Karad - 415124

CERTIFICATE

This is to certify that, Miss. Shinde Dipti Sandeep studying in M.Sc. II Roll No.5024 Department of Microbiology, Yashwantrao Chavan College of Science, Karad have been seen sincerely and successfully completed on job training at Ghodawat consumers Ltd. as prescribed by Shivaji University, Kolhapur during the academic year 2021-2022 and this report represents her bonafide work.

TEACHER IN-CHARGE

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * Karad *

Enhancing Lives Globally

GHODAWAT CONSUMER
SANJAY GHODAWAT GROUP

CIN : U15100PN2002PLC017370

Date: - 28.02.2022

Certificate

To Whomsoever It May Concern

This is to certify that **Miss. Dipti Sandeep Shinde** student of **"Yashwantrao Chavan College of Science, Karad "** M Sc. Part 2 Microbiology has completed successfully her training Program in Ghodawat Consumer Limited (Beverage Division)

She has satisfactorily carried out her academics project in our company with in a period from 20th Jan 2022 to 20th Feb 2022.

We wish her a bright and prospective career.

Ghodawat Consumer Limited

Authorized Signature

GHODAWAT CONSUMER LIMITED

GHODAWAT CONSUMER LIMITED
(Formerly known as Ghodawat Consumer Pvt. Ltd. and Ghodawat Foods International Pvt. Ltd.)
Registered Office : Plot No. 437, P. B. No.: 118 A/P. Chipri, Jaysingpur - 416101, Dist. Kolhapur, Maharashtra, India.
Corporate Office : One SGG, Plot No. 358, A/P. Majale, Sangli- Kolhapur Highway, Kolhapur - 416109
+91 230 2461111 info@ghodawat.com www.ghodawatconsumer.com
Factory : Gat No. 594, 461, 462, 470 A/P. Chipri, Tal: Shirol, Dist. Kolhapur, Maharashtra, India - 416101

ROLL NO. : 5044 **DATE: 6/7/22**

EXAM NO.:1079

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Miss. Shinde Sampada Sudam has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in "Sahyadri Sakhar Karkhana Yaswantnagar Distillery" represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Teacher Incharge

Examiner

Dr. J.U. Patil Sir
Head
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★



बहुजन हिताय । बहुजन सुखाय ।।

SAHYADRI

SAHAKARI SAKHAR KARKHANA LTD.,

YESHWANTNAGAR - 415 115, TAL. KARAD, DIST. SATARA

(MAHARASHTRA)



LABOUR(24)/2021-22/ 6466 Date : 15/02/2022

CERTIFICATE

This is to certify that **Miss.Sampada Sudam Shinde** M.Sc. II(Microbiology) student of **Yashwantrao Chavan College of Science, Karad** has completed Industrial Training in the "Distillery Section" in our Karkhana from 19 January 2022 to 08 February 2022.

This Certificate is issued as per her request.

MANAGING DIRECTOR,

Sahyadri Sah. Sakhar Karkhana Limited,

☎ : **Factory :** 8956015501, 8956015502, 8956015503, 8956015504, 8956015505

E-mail : sahyadrisugar@gmail.com, contact@sahyadrisakhar.com **Web** : www.sahyadrisakhar.com

ROLL NO. : 5045 **DATE:** 06-07-22

EXAM NO.: 1080

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that MR. AASHUTOSH JAYWANT SHINGE has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in "Sahyadri Sakhar Karkhana Yaswantnagar Distillery" represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

HEAD
DEPARTMENT OF MICROBIOLOGY

Teacher Incharge

Examiner

Dr. J.U. Patil Sir
Head
Department of Microbiology

Yashwantrao Chavan College of Science ★ Karad ★



बहुजन हिताय । बहुजन सुखाय ।।

SAHYADRI

SAHAKARI SAKHAR KARKHANA LTD.,

YESHWANTNAGAR - 415 115, TAL. KARAD, DIST. SATARA

(MAHARASHTRA)



LABOUR(24)/2021-22/ 6465

Date : 15/02/2022

CERTIFICATE

This is to certify that **Mr.Aashutosh Jaywant Shinge** M.Sc. II(Microbiology) student of **Yashwantrao Chavan College of Science, Karad** has completed Industrial Training in the "Distillery Section" in our Karkhana from 19 January 2022 to 08 February 2022.

This Certificate is issued as per his request.

MANAGING DIRECTOR,

Sahyadri Sah. Sakhar Karkhana Limited,

☎ : Factory : 8956015501, 8956015502, 8956015503, 8956015504, 8956015505

E-mail : sahyadrisugar@gmail.com, contact@sahyadrisakhar.com Web : www.sahyadrisakhar.com

Roll No. : 5046

Date : 6/7/22

Exam No. : 1081

SHRI SHIVAJI EDUCATION SOCIETY'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Shipai Aliya Riyaz** has satisfactorily carried out the required, Industrial Training work prescribed by the **'SHIVAJI UNIVERSITY, KOLHAPUR'** in semester IV, Microbiology Course M.Sc.-II. Her Training Report on, **"PRODUCTION PROCESS AND QUALITY CONTROL"** has concluded under reference of **"FISSION BIOSCIENCES LTD., VISHRAMBAUGH, SANGLI".** Represents her bonafide work in the M.Sc. Part II (Sem. IV) of academic year 2021-2022.

Teacher in-charge **Examiner** **Head**

HEAD
DEPARTMENT OF MICROBIOLOGY
Department of Microbiology

FISSION
BIO SCIENCES

Date

Ref FBS/ADMIN/L/03 Date 14/03/2022

To whomsoever it may concen

This is to certify that, Miss Aliya Riyaz Shipai student from Department of Microbiology,Yashavantrao Chavan College of Science, Karad has successfully completed Industrial Training Programe during the period 29/01/2022 to 06/03/2022

Fission Biosciences Sangli

Partener
Mr.Yadav Vinayak N.
M.Sc. (Micro)

T-2, Royal Ganesh, Opp. Ghadage Patil Hero Showroom,
100 ft road, Sangli-416416
Tal : Miraj, Dist : Sangli, Maharashtra (India)
fissionbio@gmail.com +91 9130047103

ROLL NO. : 5047 **DATE:** 05/07/22

EXAM NO.: 01082

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Mr. Suryawanshi Sandeep Appaso has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in " MAHAKALI MILK AND MILK PRODUCTS PVT.LTD " represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Examinar

Dr. J.U. Patil

Supervisor

Head,
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * Karad *

Mahakali Milk Processors Pvt Ltd.

Quality Milk & Milk Products

Date : 20/02/2022

To Whomsoever It May Concern

Certificate

This is certify that **Mr Suryawanshi Sandeep Appaso (Roll No. 5047)** Student of Yashwantrao Chavan College of Science, Karad, MSc-II Microbiology has completed Training in Microbiological Laboratory section of our Organisation from **21/01/2022 to 20/02/2022.** During the training he was found sincere and hardworking.

We wish him all the success in future and best luck.

MANAGER
MAHAKALI MILK PROCESSORS PVT. LTD.

Vijaynagar, Post. Supane, Tal. Karad, Dist. Satara. 415 114
Ph. : (02164) R. 255214, O. 255177, Fax : 225215
E.Mail : mahakalimilk77@gmail.com

Roll No:- 5048 Date :- 07/07/2022

Exam No:-

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

DEPARTMENT OF MICROBILOGY

INDUSTRIAL TRAINING CERTIFICATE

This is to certify that Miss. Tawar Madhavi Dilip has satisfactory carried out the required industrial Training presented by the Shivaji University' Kolhapur in PRATICAL COURSE VIII Microbiology Course and her Industrial Training at Sampatrao Deshmukh Co. OP. Milk Union Pvt. Ltd. Kadepur .

Project supervisor Examiner sign Head

HEAD
DEPARTMENT OF MICROBIOLOGY

Department of Microbiology

Yashwantrao Chavan Co... Karad

Estd. 1958
II Be One with the downtrodden and the underprivileged II
Shri Shivaji Education Society Karad, Board For Higher Education's
YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD
Vidyanagar, KARAD - 415 124 Dist. Satara (Maharashtra)
☎ 02164 - 271356, 271357 e-mail : prinyccsk@gmail.com
UDISE Code - 27310207715 Index No. J 21.02.002
Reacredited B++ Level by NAAC, Bangalore
AN ISO 9001-2015 CERTIFIED COLLEGE REG. NO. : RQ91/5237

Date: 19/01/2022

To,

Human Resource,

Sampatrao Deshmukh Co-OperativeDudh Sangh Ltd. Kadepur

Tal.- Kadegaon, Dist. - Sangli

Subject – Regarding Permission for training at your laboratory

Respected Sir,

As per the above mentioned subject and with reference to the application given by Miss. Tawar Madhavi Dilip (Roll Number - 5048), student of our college studying Microbiology in MSc II has granted permission to attain Microbiology related 30 days training programme at your laboratory.

Thanking You

HEAD
DEPARTMENT OF MICROBIOLOGY

Principal
Yashwantrao Chavan College of Science, Karad.

ROLL NO. : 5049 **DATE:** 6/7/2022

EXAM NO.: 1084

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that MR. ABHISHEK ANANDRAO VEER has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in "Sahyadri Sakhar Karkhana Yaswantnagar Distillery" represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Teacher incharge

Examiner

Dr. J.U. Patil Sir
Head
HEAD
DEPARTMENT OF MICROBIOLOGY
Department of Microbiology

Yashwantrao Chavan College of Science ★ Karad ★



बहुजन हिताय । बहुजन सुखाय ॥

SAHYADRI

SAHAKARI SAKHAR KARKHANA LTD.,

YESHWANTNAGAR - 415 115, TAL. KARAD, DIST. SATARA

(MAHARASHTRA)



LABOUR(24)/2021-22/ 6463

Date : 15/02/2022

CERTIFICATE

This is to certify that **Mr.Abhishek Anandrao Veer** M.Sc. II(Microbiology) student of **Yashwantrao Chavan College of Science, Karad** has completed Industrial Training in the "Distillery Section" in our Karkhana from 19 January 2022 to 08 February 2022.

This Certificate is issued as per his request.

MANAGING DIRECTOR,

Sahyadri Sah. Sakhar Karkhana Limited,

☎ : Factory : 8956015501, 8956015502, 8956015503, 8956015504, 8956015505

E-mail : sahyadrisugar@gmail.com, contact@sahyadrisakhar.com Web : www.sahyadrisakhar.com

ROLL NO. : 5051

DATE: 5-7-22

EXAM NO.: 01035

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that Miss. Yadav Shivani Dhanaji has satisfactory carried out the required Industrial Training Report work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training Report Work for the M. Sc. Part - II (Semester IV) Microbiology Course and her Industrial Training Report in " MAHAKALI MILK AND MILK PRODUCTS PVT.LTD " represents her bonafide work in the M. Sc. Part-II (Semester - IV) of academic year 2021-2022.

Teacher in-charge Examiner

Dr. [illegible] Patil
HEAD
DEPARTMENT OF MICROBIOLOGY
Department of Microbiology

Yashwantrao Chavan College of Science ★ Karad ★

Mahakali Milk Processors Pvt Ltd.

Quality Milk & Milk Products

Date : 20/02/2022

To Whomsoever It May Concern

Certificate

This is certify that **Miss Yadav Shivani Dhanaji (Roll No. 5051)** Student of Yashwantrao Chavan College of Science, Karad, MSc-II Microbiology has completed Training in Microbiological Laboratory section of our Organisation from **21/01/2022 to 20/02/2022.** During the training she was found sincere and hardworking.

We wish her all the success in future and best luck.

MAHAKALI ... LTD.

Vijaynagar, Post. Supane, Tal. Karad, Dist. Satara. 415 114
Ph : (02164) R. 255214, O. 255177, Fax : 255215
E.Mail : mahakalimilk777@gmail.com

ROLL NO. :-5052

DATE: 6/7/2022

Exam No:- 1053

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Sayali Mohan Kamble** has satisfactory carried out the required Industrial Training prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Industrial Training for the M. Sc. Part - II (Semester - IV) Microbiology Course and her Industrial Training At **"Sampatrao Deshmukh Co-Operative Milk Union Ltd. Kadepur"** represents her bonafide work in the M. Sc. Part II (Semester - IV) of academic year 2021-2022.

Teacher In Charge

Examiner

Head
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science Karad

Sampatrao Deshmukh Co. Op. Milk Union Ltd. Kadepur

(Multi State)

Dongarai

Kadepur, Tal. Kadegaon, Dist. Sangli, 415 305, Maharashtra (India)
Tel. (02347) 245333
Email : sdcmu.kadepur@gmail.com

Ref. No./SDCMU/ 154/2022-23

Date: - 06/07/2022

CERTIFICATE

This is to certify that, **Miss. Kamble Sayali Mohan M.Sc. II year** student of microbiology from **Yashwantrao Chavan College of Science Karad** has successfully completed her Training regarding **"Production Process and Quality Control"** by **Sampatrao Deshmukh Co.Op. Milk Union Ltd., Kadepur. During period 17/01/2022 to 12/02/2022**

During the period of training work, she was found to be sincere, punctual and hard working.

We wish all the best for his future endeavors.

Sampatrao Deshmukh Co-op. Milk Uni. Ltd Kadepur
Hingangaon Bkl. Tal. Kadegaon Dist Sangli
M S C S/
CR/66/99
Dt. 06/04/1999

General Manager

Roll No:- 5004 Date: 06/07/2022

Exam Seat No. :- 1042 **PRN:-** 2020063094

Shri Shivaji Education Society's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF MICROBIOLOGY

INDUSTRIAL TRAINING CERTICATE

This is to certify that Mr. Prathamesh Bhagwantsinh Bhagwat has satisfactory carried out the required industrial training prescribed by Shivaji University Kolhapur in PRACTICAL COURSE – VIII : Industrial training for M.Sc. II (semester –IV) microbiology course and his industrial training report entitled **"INDUSTRIAL TRAINING AT MISTAIR HEALTH AND HYGIENE, PVT. LTD."** represent his bonafide work in the M.Sc. II (Semester IV) of academic year 2021-22

Teacher Incharge Examiner Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ★ Karad ★

Factory
Plot No.: 3,
M.I.D.C., SHIROLI, KOLHAPUR - 416 122.
TEL : 0230 - 2469187, 2468984, 2469351
Email : admin@mistair.net

MISTAIR
HEALTH & HYGIENE
PVT. LTD.

Certificate of Completion

This is to certify that Mr. PRATHAMESH BHAGWANTSINH BHAGWAT, a student of M.Sc. II (Micro.), Yashawantrao Chavan College of Science Karad, has successfully completed training programme from 27th JAN 2022 to 19th FEB 2022, at Mistair Health & Hygiene Pvt. Ltd., Kolhapur.

During the period of his training programme with us he was found punctual, hardworking & inquisitive.

We wish him very Success in Life.

MISTAIR HEALTH & HYGIENE PVT. LTD. SHIROLI (PULACHI)

Patil
09/03/22

MISTAIR HEALTH & HYGIENE PVT. LTD.
Kolhapur.

Shivaji University, Kolhapur

Affiliated to

Yashwantrao Chavan College of Science, Karad

Department of Botany

Project on

"Effect of Weed Extract on seed germination and seedling growth on mustard seeds"

A project submitted during the degree of Master of

Science in Botany

by

Miss Manasi Mohan Deshmukh

Under the supervision of

Dr. S. A. Kirtane

Department of Botany,
Yashwantrao Chavan College of Science, Karad

2021-2022

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

26/8/2022

Exam. Seat No. 1000

Date: 9/8/2022

Roll No.- 5001

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

Accredited at the B++level by NAAC, Bangalore

JAS-ANZ

Department of Botany

AN ISO 9001:2000 CERTIFIED COLLEGE

Reg: R001/5227

This is to certify that Miss. Manasi Mohan Deshmukh of M. Sc. II Botany has "Effect of Weed Extract on seed germination and seedling growth on mustard seeds" completed Project work based on Special paper entitled satisfactorily as prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2021 - 2022.

Teacher In-charge

Examiner

Head

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

Department of Botany

Head

Department of Botany

Yashwantrao Chavan College of Science, Karad

A PROJECT REPORT

Entitled

Study the effect of variable concentrations of Carbendazim (Bavistin) on the Mitosis division of *Allium cepa* L.

A Project Report Submitted during the degree of Master of Science in Botany

To

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DIST. – SATARA

Affiliated to

SHIVAJI UNIVERSITY, KOLHAPUR

Under Guidance of

Dr. S. A. Kirtane (M. Sc. Ph. D.)
Assistant Professor
Department of Botany
Yashwantrao Chavan College of Science, Karad

By

Mr. GANGAWANE AMIT ANANDA
Department of Botany
Yashwantrao Chavan College of Science, Karad

August, 2022

Yashwantrao Chavan College of Science ★ Karad ★
BOTANY

Exam. Seat No. - 01001

Roll No. - 5002

Date: 09/08/2022

Shri. Shivaji Education Society Karad, Board for Higher Educations

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

IAS-ANZ

AN ISO 9001:2015 CERTIFIED COLLEGE
Reg.: RQ91/5237

Accredited at the B^{++} level by NAAC, Bangalore

Department of Botany

CERTIFICATE

This is to certify that **Shri. Gangawane Amit Ananda** of M. Sc. II Botany has completed Project work based on Special paper entitled **Study the effect of Carbendazim (Bavistin) on the Mitosis division of *Allium cepa* L.** satisfactorily as prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2021 - 2022.

Teacher In-charge

Examiner

Head
Department of Botany

Head
Department of Botany
Yashwantrao Chavan College of
Science, Karad

Yashwantrao Chavan College of Science
BOTANY

Shivaji University, Kolhapur

Affiliated to

Yashwantrao chavan College of Science, Karad

Department of Botany

Project on

STUDY OF EFFECT ORGANIC CHEMICAL FERTILIZER Of MITOSIS DIVISION MAIZE PLANT

A Project submitted The during degree of Master of Science

in

Botany

By

Mr. Vishal bhimrao karande.

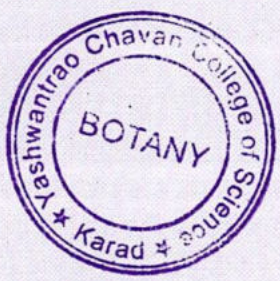
Uder the supervision

Dr. S.A Kirtane

Department Of Botany

Yashwantrao chavan college of science karad

2022



Exam. Seat No -1002

Date: 09/8/2022

Roll No.- 5003

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE
Reg: RQ91/5237

JAS-ANZ

Department of Botany

CERTIFICATE

This is to certify that Mr. Vishal Bhimrao Karande of M. Sc. II Botany has completed Project work based on Special paper entitled... ***Study Of Effect Organic chemical Fertilizers of Mitosis division Maize Plant*** *satisfactorily as prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2021 - 2022.*

Teacher In-charge

Examiner

Head
Department of Botany

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

Head
Department of Botany
Yashwantrao Chavan College of
Science, Karad

Shivaji University, Kolhapur

Yashwantrao Chavan College of Science, Karad

Affiliated to

Department of Botany

Project on

'Effect of Allelopathic Effects of Aqueos Extract Of leaf of Azadirachta indica on seed germination of Vigna radiata

A project submitted during the degree of Master of Science in Botany

by

Mr.Shrinivas Umaji Malame

Under the supervision of

Dr. S. A. Kirtane

Department of Botany,

Yashwantrao Chavan College of Science, Karad.

2022

Yashwantrao Chavan College of Science BOTANY Karad

20/8/2022

Exam. Seat No. 1004

Roll No.- 5005

Date: 9/08/2022

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

Vidyanagar, Karad – 415 124

Accredited at the B^{++}level by NAAC, Bangalore

JAS-ANZ

Department of Botany

This is to certify that Mr. Shriunivas Umaji Malame of M. Sc. II Botany has completed Project work based on Special paper entitled 'Effect of Allelopathic Effects of Aqueos Extract Of leaf of Azadirachta indica on seed Germiation of Vigna radiata satisfactorily as prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2021 - 2022.

Teacher In-charge

Examiner

Head

Department of Botany

Head
Department of Botany
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★
BOTANY

Shivaji University, Kolhapur

Affiliated to

Yashwantrao Chavan College of Science, Karad

Department of Botany

Project on

'Effect of sodium azide on seed germination and seedling growth on *Trigonella Foenum'*

A project submitted during the degree of Master of Science

Miss Ahista Ilahi Mulla

Botany

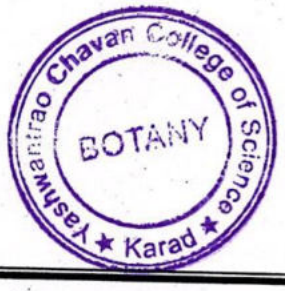
By

Under the supervision of

Dr. S. A. Kirtane

Department of Botany

Yashwantrao Chavan College of Science, Karad



2020-2022

Exam. Seat No. 1005

Roll No. 5006

Date: 9-08-22

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Reg: RQ91/5237

IAS-ANZ

Accredited at the B++ level by NAAC, Bangalore

Department of botany

CERTIFICATE

This is to certify that ~~Shri~~ / Miss. Ahista Ilahi Malla *of M. Sc. II Botany has completed Project work based on Special paper entitled* Effect of Sodium azide on seed germination and seedling growth on Trigonella foenum ..... *satisfactorily prescribed by Shivaji University, Kolhapur as fulfillment of practical syllabus during the year 2021 - 2022.*

Teacher In-charge **Examiner** **Head**

Yashwantrao Chavan College of Science ★ Karad BOTANY

Department of Botany

Head

Department of Botany

Yashwantrao Chavan College of Science, Karad

Shivaji University, Kolhapur

Affiliated to

Yashwantrao Chavan College of Science, Karad

Department of Botany

Project on

'Effect of Cigarette and Bidi smoke on physiology and cytology of *Allium cepa* and *Cajanus cajan*'

A project submitted during the degree of Master of Science in

Botany

by

Miss Pooja Ramchandra Nikade.

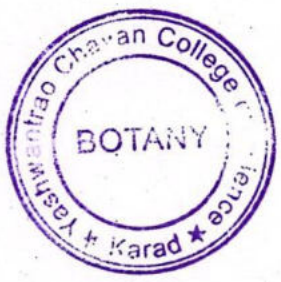
Under the supervision of

Dr. S. A. Kirtane

Department of Botany,

Yashwantrao Chavan College of Science, Karad

2022



Exam. Seat No. 1006

Date: 09/08/22

Roll No.- 5007

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

Accredited at the B^{++} level by NAAC, Bangalore

JAS-ANZ

Department of Botany

CERTIFICATE

This is to certify that Miss. Pooja Ramchandra Nikade of M. Sc. II Botany has completed Project work based on Special paper entitled **'Effect of Cigarette and Bidi smoke on physiology and cytology of *Allium cepa* and *Cajanus cajan*'**

The project is satisfactorily completed as prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2021 - 2022.

Teacher
In-charge

Examiner

Head
Department of Botany

Head
Department of Botany
Yashwantrao Chavan College of
Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

Shivaji University, Kolhapur

Affiliated to

Yashwantrao Chavan College of Science, Karad

Department of Botany

Project on

"Effect of U.V. radiation on seed germination and seedling growth of *Cicer arietinum* and *Vigna unguiculata*"

A project submitted during the degree of Master of Science in Botany

by

Miss. Dhanshri Sambhaji Patil.

Under the supervision of

Dr. S. A. Kirtane

Department of Botany,

Yashwantrao Chavan College of Science, Karad

2021-2022

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

Exam. Seat No. 1007 Date: 09-08-2022

Roll No.- 5008

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

Accredited at the B++ level by NAAC, Bangalore

JAS-ANZ

Department of Botany

CERTIFICATE

This is to certify that Shri / Miss. Dhanshri Sambhaji Patil of M. Sc. II Botany has completed Project work based on Special paper entitled **'Effect of U.V. radiation on seed germination and seedling growth of *Cicer arietinum* and *vigna unguiculata*'**

satisfactorily as prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2021 - 2022.

Teacher In-charge Examiner Head

Department of Botany

Head
Department of Botany
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

Shivaji University, Kolhapur

Affiliated to

Yashwantrao Chavan College of Science, Karad

Department of Botany

Project on

'Effect of Herbicide on seed germination and seedling growth on '*Cicer arientinum*'

A project submitted during the degree of Master of Science inBotany

by

Miss Divyarani Chavagonda Patil.

Under the supervision of

Dr. S. A. Kirtane

Department of Botany,

Yashwantrao Chavan College of Science,

Karad. 2022

Yashwantrao Chavan College of Science * Karad * BOTANY

Exam. Seat No. 0999

Roll No.- 5009

Date: 9/8/2022

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

Vidyanagar, Karad – 415 124

Accredited at the B++ level by NAAC, Bangalore

JAS-ANZ

Department of Botany

CERTIFICATE

This is to certify that ~~Shri~~ / Miss. Divyarani Chavagonda Patil of M. Sc. II Botany has completed Project work based on Special paper entitled **'Effect of Herbicide on seed germination and seedling growth on '*Cicer arientinum*'** *satisfactorily as prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2021 - 2022.*

Teacher In-charge

Examiner

26/08/22

Head

Department of Botany

Head
Department of Botany
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

Shivaji University, Kolhapur

Yashwantrao Chavan College of Science, Karad

Department of Botany

Project on

'Effect of weed extract on Seed germination on Physiology of *Vigna radiata L.*'

A project submitted during the degree of Master of Science in Botany

by

Miss. Patil Nikita Jayvantrao

Under the Guidance of

Dr. S. A. Kirtane

Department of Botany,

Yashwantrao Chavan College of Science, Karad 2022



26/08/2022

Exam. Seat No. 1008 Date: 9/8/2022

Roll No.- 5010

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

Accredited at the B++ level by NAAC, Bangalore

JAS-ANZ

Department of Botany

CERTIFICATE

This is to certify that Shri / Miss. Nikita Jayvantrao Patil of M. Sc. II Botany has completed Project work based on Special paper entitled '**Effect of weed extract on Seed germination on Physiology of** *Vigna radiata L.*' satisfactorily as prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2021 - 2022.

Teacher In-charge

Examiner

Head

Department of Botany

Head
Department of Botany
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ BOTANY ★

Shivaji University Kolhapur

Affiliated To

Yashwantrao Chavan College of Science, Karad

Department Of Botany Project On

Effect Of Colchicine Treatment on Germination, Physiology Of *Vigna radiata* Seeds.

A Project Submitted During the Degree OfMaster Of Science In Botany

By

Miss – Prajakta Babaso Pawar.

Under The Supervision Of

Dr. S.A. Kirtane.

Department Of Botany

Yashwantrao Chavan College Of Science, Karad

2021-2022

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

Exam. Seat No. 1009 Date: 9/8/2022

Roll No.- 5011

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

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Vidyanagar, Karad – 415 124

Accredited at the B++level by NAAC, Bangalore

JAS-ANZ

Department of Botany

AN ISO 9001:2000 CERTIFIED COLLEGE
Reg: RQ91/5237

This is to certify that Miss. Prajakta Babaso Pawar of M. Sc. II Botany has "Effect Of Colchicine Treatment On Germination, Physiology Of Vigna radiata Seeds" completed Project work based on Special paper entitled satisfactorily as prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2021 - 2022.

Teacher In-charge Examiner Head

Department of Botany

Head
Department of Botany
Yashwantrao Chavan College of
Science, Karad

Yashwantrao Chavan College of Science Karad BOTANY

CERTIFICATE

This is certify that Miss Neha Shivaji Gaikwad has satisfactirly carried out project out work on

Prescribed by the Shivaji University Kolhapur for the B.Sc.:-III Mathematics (2021-2022)

04/06/22

04/06/2022

Teachers in charge

Examiner

Head of Department

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

CERTIFICATE

DEPARTMENT OF MATHEMATICS

This is certify that;

Gaikwad Sanket Dattatray.

Has satisfactorily carried of the requires practical work prescribed by " " for the T.Y. B.SC course and this project representedhis bonafide work in the year 2021-2022

04/06/2022

04/06/22

Project Guide	Examiner	Head
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A.A. Shah		Y.C.College
		karad

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

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Prescribed by the Shivaji University Kolhapur for the B.Sc.:-III Mathematics (2021-2022)

04/06/2022

Teachers in charge

Examiner

Head of Department

Yashwantrao Chavan College of Science
MATHEMATICS
Karad

CERTIFICATE

This is certify that Miss Rutuja Shashikant Mohite has satisfactirly carried out project out work on

Prescribed by the Shivaji University Kolhapur for the B.Sc.:-III Mathematics (2021-2022)

04/06/2022

04/06/22

Teachers in charge

Examiner

Head of Department

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

Shree Shivaji Education Society Karad , Board For Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF, SCIENCE , KARAD

DEPARMENT OF MATHEMATICS

CERTIFICATE

This is to certify that Miss Katre Gauri Chandrakant has satisfactorily carried out project work on "GRAPHA THEROY AND APPLICATIONS"

Prescribed by the Shivaji University Kolhapur for the B.Sc.- 3 MATHEMATICS (2021-2022)

Date 04/06/2022

Teachers in Charge | Examiner | Head of Department

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, WADKAR SIDDHANT UMESH and CHANDANSHIVE ROHIT ASHOK have completed project work entitled "Covid-19 Helpline and Hospital Management System" for the partial fulfilment of the award of the degree "Bachelor of Computer Science (Optional)" of Shivaji University, Kolhapur for the academic year 2021-2022.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 31/05/2022
Place: Karad.

Prof. A. G. Jirange
(Project Guide)

Examiner

Prof. A. A. Mulla
(Head of Department)

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, SHINDE SHUBHAM HANMANT and PAWAR SAGAR MARUTI have completed project work entitled " CABLE OPERATOR SYSTEM" for the partial fulfilment of the award of the degree "Bachelor of Computer Science (Optional)" of Shivaji University, Kolhapur for the academic year 2021-2022.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 31/05/2022
Place: Karad.

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(Project Guide)

Examiner

Prof. A. A. Mulla
(Head of Department)

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, GHORPADE SHRAVANI VINAYAK and GAIKWAD SHUBHAM ANIL have completed project work entitled "Jewellery Shop Management System" for the partial fulfilment of the award of the degree "Bachelor of Computer Science (Optional)" of Shivaji University, Kolhapur for the academic year 2021-2022.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 31/05/2022
Place: Karad.

Prof. S. G. Padyal
(Project Guide)

Examiner

Prof. A. A. Mulla
(Head of Department)

SHRI SHIVAJI EDUCATION SOCIETY, KARAD

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, MAGAR POONAM DHANAJI and JADHAV VIDYA KRISHNAT have completed project work entitled "Dental Clinic Management System" for the partial fulfilment of the award of the degree "Bachelor of Computer Science (Optional)" of Shivaji University, Kolhapur for the academic year 2021-2022.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 31/05/2022
Place: Karad.

Prof. A. G. Jirange
(Project Guide)

Examiner

Prof. A. A. Mulla
(Head of Department)

SHRI SHIVAJI EDUCATION SOCIETY, KARAD

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, BHOSALE AASHISH ANIL and JAGTAP SUSHANT SHIVAJI have completed project work entitled " Loan Finance System" for the partial fulfilment of the award of the degree "Bachelor of Computer Science (Optional)" of Shivaji University, Kolhapur for the academic year 2021-2022.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 31/05/2022
Place: Karad.

Prof. A. G. Nalawade
(Project Guide)

Examiner

Prof. A. A. Mulla
(Head of Department)

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, **Miss. Nikita Sunil Suryawanshi & Miss. Amruta Santosh Ghadage** have completed the project work entitled "Toy Store Management System" for the partial fulfilment of award pf the degree **"Bachelor of Science Computer Science (B.Sc.CS.(Entire) CBCS-III)"** of Shivaji University ,Kolhapur for the academic year 2021-2022.

To best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 2 / 6 /**2022**

Place: Karad

Prof.A.G.Jirange
(Project Guide)

6/6/22
Examiner

Prof.A.A.Mulla
(Head of Department)

SHRISHIVAJIEDUCATIONSOCIETY,KARAD

"BeOneWithTheDowntroddenAndtheUnder privileged"

CERTIFICATE

YASHWANTRAOCHAVANCOLLEGEOFSCIENCEKARAD.

DepartmentOfComputerScience

This is to certify that Mr.PawarPrajotNathuram , MrKadam Prasad Satishhavesatisfactorilycompletedthe Majorprojectentitledas"APMC Market MangementSystem"in the partial fulfillment of award of degree Bachelor Of Computer Science (B.Sc. Cs. Entire III) of Shivaji University ,Kolhapurduringthe Academic year2021-2022.

Place: Karad
Date:/ /2022

Prof.Mr.Nalawade. A.V
(Guide)

Examiner

Prof. A.A.Mulla
(HeadofDepartment)

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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that, **Mr. Rushikesh Purushottam Aundhakar & Mr .Shridhar Lav Jadhav** have completed the project work entitled "Currency Conversion System " for the partial fulfilment of award of the degree **"Bachelor of Science Computer Science(B.Sc.CS.(Entire) CBCS- III)** of Shivaji University ,Kolhapur for theacademicyear2020-2021.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date:31 / 05/**2022**

Place: karad

Prof.S.G.Padyal		**Prof.A.A.Mulla**
(Project Guide)	**Examiner**	**(Head of Department)**

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that ,**Miss. Harshada Ananda Kadam & Mr. Omkar Ananda Kadam** have completed the project work entitled "Vehicle Parking Management System " for the partial fulfilment of award of the degree **"Bachelor of Science Computer Science (B.Sc.CS.(Entire) CBCS- III)** of Shivaji University ,Kolhapur for the academic year 2021-2022.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 31 / 05/2022

Place: Karad.

31/05/22

Prof.A.V.Nalawade

(Project Guide)

3.6.22

Examiner

Prof. A.A.Mulla

(Head of Department)

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that ,**Mr. Swapnil Hanamant Salunkhe.** have completed the project work entitled "Gym Management System" for the partial fulfilment of award of the degree **"Bachelor of Science Computer Science (B.Sc.CS.(Entire) CBCS- III)** of Shivaji University ,Kolhapur for the academic year 2021-2022.

To the best of knowledge and belief this is their original work and not submitted earlier, anywhere for any purpose.

Date: 03/ 06 /2022

Place: Karad.

6/6/22

Prof. A.A.Mulla

Examiner **(Head of Department)**

Prof.

03/06/22

A.V. Nalawade(Project Guide)

Yashwantrao Chavan College of Science, Karad

Department Of Electronics

CERTIFICATE

This is to certify that, the project work entitled "*Automatic Temple Bell* "which is submitted by,

Mr. Jadhav Vinayak kumar *(Roll No: -3064)*

Mr Suryawanshi Siddhant Bajrang *(Roll No: -3073)*

Mr. Jadhav Sahil Vinayak ***(Roll No: -3750)***

inthe partial fulfillment of the requirement for the award of the degree of ***"Bachelorof Science in Electronics"*** of ***Shivaji University, Kolhapur*** is the record of their own work carried out under my guidance year 2021-22.

Place – Karad

Date –

Miss. Sarwade M.P.

(Project Guide)

Head of Department

Examiner

Yashwantrao Chavan College of Science ★ Karad ★ ELECTRONICS

CERTIFICATE

This is to certify that has successfully completed the project on "ANALYSIS OF FATALITIES IN TERRORIST VIOLENCE IN KASHMIR FROM 1988 TO 2019"for the partial fulfilment of bachelor of science degree in Statistics under my supervisions as per rules and regulation of Shivaji university, Kolhapur during the academic year 2021-22 and submitted the same this work represents bonafied work of the students.

Sr.No.	Name of students	Roll no.
1.	Bhosale Atul Subhash	3041
2.	Nangare Vikas Bajarang	3046
3.	Sutar Suraj Ashok	3049
4.	Kamble Ashwaghosh Mahavir	3053

Teacher incharge

Examiner

Head of Department

(Statistics)

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE ,KARAD

Department of statistics

CERTIFICATE

This is to certify that has successfully completed the project on "analysis of problems of physically handicapped students" for the partial fulfilment of bachelor of science degree in statistics under my supervisions as per rules and regulation of shivaji university, Kolhapur during the academic year 2021-22 and submitted the same this work represents bonafied work of the students.

Sr no.	Name of students	Roll no
1	Jadhav Arpita Vijay	3045
2	Patil Prajwal Pritam	3048
3	Mane Pranita Popat	3054

S.P. Patil
8.06.2022

Teacher incharge Examiner Head of Department (statistics)

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

CERTIFICATE

This is certify that,

Mr. Thorat Akshay Sambhaji, Miss, Mulik Swaranjali S. and Miss Nalawade. Manali L. Of B.Sc.-III, Rollno. 3051, 3052, 3055 Has actively participated in the Project work held in Month of May 2022 and successfully completed under the guidance of Miss Thombare P.J.

Exam Seat No. :

Signature of Guide

Head of Statistics Department

S.P. Patil
8/06/2022
Signature of the Examiner

Yashwantrao Chavan College of Science
STATISTICS
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF STATISTICS

Project Work (2021-22)

Certificate

This is to certify to,

Miss. Ingle Nikita Gorakh

Roll No. 3044 Exam Seat No. 31043

Has actively participated in the project work, held in month of April-2022 and successfully completed it under the guidance of Miss. P. J. Thombare.

Signature of Guide | Examiner | Head of Department

Yashwantrao Chavan College of Science * Karad * STATISTICS

Yashwantrao Chavan College of Science, Karad.

A

Project Report On

"PREPARATION OF SOAP (HOMEMADE) BY USING LOCALLY AVAILABLE ESSENTIAL OILS"

Submitted To

Department of Chemistry

for the Completion of Bachelor of Science

in

Chemistry

SUBMITTED BY

Miss. Mate Rutika Sanjay *Roll No. 3432*

UNDER THE GUIDANCE OF

Mr. S. D. Karande

(M.Sc., NET)



Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

CERTIFICATE

This is to certify that, *Miss. Mate Rutika Sanjay– 3432,* have successfully completed the Project On ***"PREPARATION OF SOAP (HOMEMADE) BY USING LOCALLY AVAILABLE ESSENTIAL OILS"*** for the partial fulfillment for the award of the degree of bachelor of Science in Chemistry under my supervision as per rules and regulations of Yashwantrao Chavan College of Science, Karad affiliated to Shivaji University, Kolhapur during the academic year 2021-2022. This works present bonafied work of the students.

Mr. S. D. Karande
Project Guide

Prof. Dr. S. H. Burungale
Head of Department
Chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of
Science, Karad

Place : Karad.

Date :

DEPARTMENT OF CHEMISTRY

DECLARATION

This is to certify that, **Miss. Mate Rutika Sanjay – 3432,** have submitted the Project entitled **"PREPARATION OF SOAP (HOMEMADE) BY USING LOCALLY AVAILABLE ESSENTIAL OILS"** for the year 2021-2022. This project was carried out under my guidance and supervision.

Mr. S. D. Karande
Project Guide

Place : Karad.

Date :

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide ***Dr. S. D. Karande., Assistant Professor,*** *Department of Chemistry, for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.*

I also extend my sincere thanks to ***Dr. S. H. Burungale,*** *Head of Department of Chemistry for providing the laboratory facilities.*

My sincere thanks are due to ***Principal, Dr. S. B. Kengar*** *for his constant encouragement.*

I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this Project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this Project.

Name of Student	*Roll No.*
Miss. Mate Rutika Sanjay	***3432***

Place : Karad

Date :

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CHAPTER 1 INTRODUCTION

1.1 OVERVIEW

Soaps are cleaning agents that are usually made by reacting alkali (e.g., sodium hydroxide) with naturally occurring fat or fatty acids. The reaction produces sodium salts of these fatty acids, which improve the cleaning process by making water better able to lift away greasy stains from skin, hair, clothes, and just about anything else. As a substance that has helped clean bodies as well as possessions, soap has been remarkably useful.

Soap is a salt of a fatty acid used in a variety of cleansing and lubricating products. In a domestic setting, soaps are usually used for washing, bathing, and other types of housekeeping. In industry, soaps are used as thickeners, components of some lubricants, and precursors to catalysts. When used for cleaning, soap solubilizes particles and grime, which can then be separated from the article being cleaned. Where soaps act as surfactants, emulsify oils to enable them to be carried away by water. Soap is created by mixing fats and oils with a base, as opposed to detergent which is created by combining chemical compounds in a mixer.

Soap cleans very well in soft water. It is not toxic to water life. It can be broken down by bacteria. However, it is slightly soluble in water, so it is not often used in washing machines. It does not work well in hard water. It cannot be used in strongly acidic solutions. Mild hand soaps are only basic enough to remove unwanted skin oils. For other forms of oil, dishwashing soap is strong enough to remove almost all forms of oil without damaging petroleum products such as plastics. It does not damage skin either.

Soap can be produced by a simple process called saponification that takes place when a fatty acid comes in contact with an alkali. When fats or oils, which contain fatty acids, are combined with a strong alkali, the alkali first splits the fats or oils into fatty acids and glycerine. After that, the sodium or potassium part of the alkali joins with the fatty acid part of the fat or oils. This mixture is called soap or the potassium or sodium salt of the fatty acid. So, soap is a cleansing agent created by the combination of fats and oils with an alkaline base.

1.1 HISTORY OF SOAP

Although no one really knows when soap was discovered, there are various legends surrounding its beginning. The discovery of soap predates recorded history, going back perhaps as far as six thousand years.

According to Roman legend, soap was named after Mount Sapo, an ancient site of animal sacrifices. After an animal sacrifice, rain would wash animal fat and ash and that was collected under the ceremonial altars, down to the banks of the Tiber River. Women washing clothes in the river noticed that if they washed their clothes in certain parts of the river after a heavy rain their clothes were much cleaner. This is the emergence of the first soap or at least the first use of soap.

A soap-like material found in clay cylinders during the excavation of ancient Babylon is evidence that soap making was known as early as 2800 B.C. Inscriptions on the cylinders say that fats were boiled with ashes, a soap-making method. By the second century A.D., the Greek physician, Galen, recommended soap for both medicinal and cleansing purposes. Bathing habits all over Europe rose and declined with Roman civilization. When Rome fell in 467 A.D., so did bathing. It is believed that the lack of cleanliness and poor living conditions contributed to the many plagues of the middle Ages.

In the early beginnings of soap making, it was an exclusive technique used by small groups of soap makers. The demand for soap was high, but it was very expensive and there was a monopoly on soap production in many areas. Over time, recipes for soap making became more widely known, but soap was still expensive. Back then, plant by products and animal and vegetable oils were the main ingredients of soap. The price of soap was significantly reduced in 1791 when a Frenchman by the name of LeBlanc discovered a chemical process that allowed soap to be sold for significantly less money.

1.2 SAPONIFICATION OF SOAP

The basic structure of all soaps is essentially the same, consisting of a long hydrophobic (water-fearing) hydrocarbon "tail" and a hydrophilic (water-loving) anionic "head":



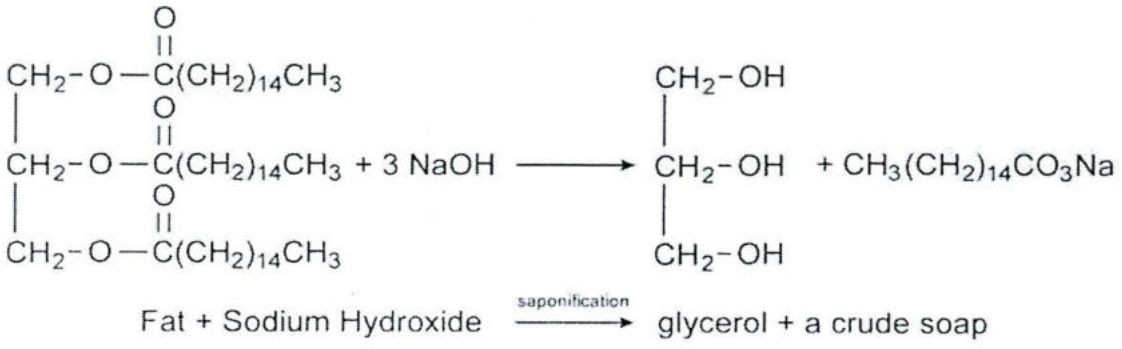
The length of the hydrocarbon chain ("n") varies with the type of fat or oil but is usually quite long. The anionic charge on the carboxylate head is usually balanced by either a positively charged potassium (K^+) or sodium (Na^+) cation.

Saponification is a process by which triglycerides are reacted with sodium or potassium hydroxide to produce glycerol and fatty acid salt called "soap". The triglycerides are most often animal fats or vegetable oils. When sodium hydroxide is used, a hard soap is produced. Using potassium hydroxide results in a soft soap.

Saponification Example: Lipids that contain fatty acid ester linkages can undergo hydrolysis. This reaction is catalysed by a strong acid or base. Saponification is the alkaline hydrolysis of the fatty acid esters. The mechanism of saponification is:

1. Nucleophilic attack by the hydroxide
2. Leaving group removal
3. Deprotonation

The chemical reaction between any fat and sodium hydroxide is a saponification reaction.



1.3 TYPES OF SOAP

There are many types of soaps, depending upon the usage. There are hard and soft, and everything in-between soaps. Hardness of soap is often achieved through the addition of hardening agents, so many natural soaps tend to be softer.

- **Kitchen Soap**: Kitchen soap is soap intended for use in the kitchen mainly to serve the purpose of dish-washing. They are further categorized into two: cleansers and detergents.
  - **Cleansers:** Cleansers are often made with mild abrasives and they are formulated to eliminate heavy oil or solid particles and hard-to-remove stains. The cleansers come in many different types depending on the type of abrasives they contain.
  - **Detergents:** Dish detergents are made to remove tough grease and release the solid dirt particles in the foam that is produced by the detergent. There are two types of dish detergents: machine dishwasher detergents and hand dishwashing detergents.
- **Laundry Soap**: Effective in cleaning solid particles, grease and organic compound in clothes and can be quite convenient to wash clothes during travels because it is easy to carry.
- **Novelty Soap**: Soap that comes in various shapes colors such as fish, cake, and moustache. Novelty soap serves more than a cleaning soap. It provides enjoyment and amusement to the children who use them.
- **Guest Soap**: Mini soap, generally smaller than the usual soap bar and comes with various attractive shapes. Designed for guest's usage.
- **Medicated Soap**: Medicated soap is soap with added antiseptics and disinfectants to kill bacteria.
- **Beauty Soap**: Beauty Soap features fragrance and ingredients for different skin types. They can feature special oil blend or glycerine.

1.4 USES OF SOAP:

Although the popularity of soap has declined due to superior detergents, one of the major uses of animal tallow is still for making soap, just as it was in years past. Beyond its cleaning ability, soap has been used in other applications. For example, certain soaps can be mixed with gasoline to produce gelatinous napalm, a substance that combusts more slowly than pure gasoline when ignited or exploded in warfare.

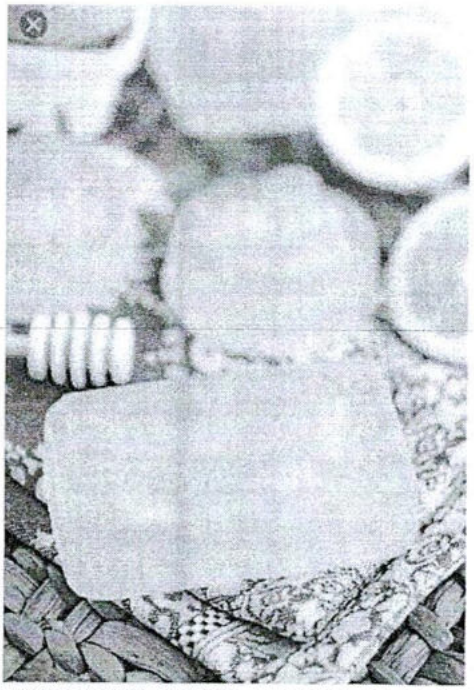
Soaps are also used in "canned heat," a commercialized mixture of soap and alcohol that can be ignited and used to cook foods or provide warmth. Overall, soap is a remarkably useful substance, just as it has been for thousands of years.

1.7 LITERATURE REVIEW

There has been number of studies done for saponification reaction for preparation of Soap. Notable ones are listed below:

Sr. No.	REFERENCE	OIL USED FOR ANALYSIS
1	A. A. Warra [1](2010)	Coconut oil
2	K. Cable [2](2015)	Coconut oil
3	A. G. Aaron	Palm oil and coconut oil

CHAPTER 2



BENEFITS OF NATURAL LIME SOAP

- Lemon soap has an antibactrical quality that helps to cleaning the skin and getting rid of bacteria. It helps to stay away from acne and pimples and keep skin healthy and soft. A good astringent will help to remove oil buildup, tighten up saggy skin, and prevent acne breakout.
- Lemon has purifying properties which clear the air, resulting in a clear and fresh environment. Lemon not only cleanse through direct application, but it also seemingly have positive effect on eradacting pollution in the air.

➢ **Soothes Burning effect**

Lemon gel is rich of vitamin C also been used for centuries as a natural way to treat sunburn. The cooling gel helps ease the symptoms of sore, tight skin and has been used successfully in tests involving first and second degree burns.

➢ **Moisturizes the Skin:**

Applied to the skin in cosmetics, natural soaps or even in its raw gel form, Aloe-Vera is moisturizing. Its emollient nature can help relieve dry, itchy skin and also promotes skin healing from conditions like psoriasis.

➢ **Repels Acne Bacteria:**

Naturally antimicrobial, lemon gel helps kills the bacteria responsible for acne

breakouts, also reducing the appearance of pimple scars with its skin lightening qualities.

➢ Facial cleanser

Some over-the-counter face washes have lemon extracts to enhance the cleansing properties of the products. If you're considering adding lemon oil extract to your own face washing routine, simply mix one drop of oil to a small amount of the wash in your hand before use.

Since lemon oil can potentially dry out your skin, you may want to try this method once a day to start. Discontinue using it entirely if you experience redness and irritation.

➢ LEMON OIL

- It cleanses your skin from deep within.
- Its fresh, citrusy aroma can rejuvenate and activate your mind.
- It's rich in vitamin C and antioxidants which fight off acne-causing germs.
- Its astringent properties reduce sebum and shrink large pores by acting a natural toner
- It brightens your skin and reduces blemishes and acne scars.
- Its fresh aroma lingers on your skin and keeps you refreshed all day!

CHAPTER 3

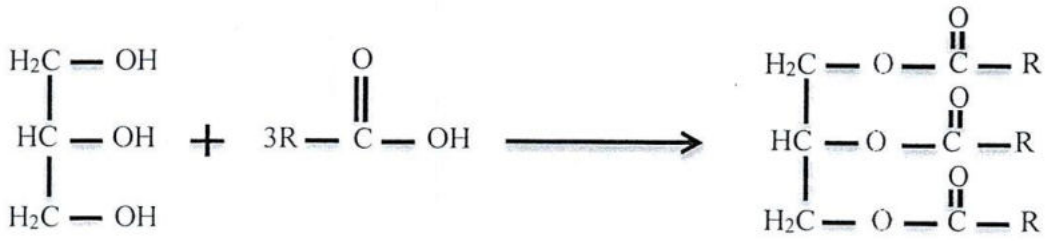
EXPRIMENTAL WORK

- **Aim:** To study saponification reaction for preparation of soap.

➢ **Theory:-**

- Oil or fat when treated with sodium hydroxide solution ,gets converted into sodium salt of fatty acid(soap) and glycerol .This reactions is known as saponification. The fatty acid of the glyceride is converted to sodium (or potassium) salt of the acid (soap) and glycerol is produced. For example, stearic acid reacts with sodium hydroxide to produce soap and glycerol.

➢ **Reaction:**



Glycerol Fats Triacylglycerol

➢ **Requirement** – Beaker, Stirrer, Burner, Soap mould, Weight balance,Lemon juice, Caustic soda, Coconut oil, glycerin

➢ **Procedure:**

- Take 20g of caustic soda and add 50g of water in it.
- Dissolve the caustic in water completely.

- Take 50g coconut oil in 500ml of beaker warm it.then add caustic soda and water solution in it with constant sterring for about 5 min.
- add 20 ml of glycerin in it then solution become transparent.
- Add 40ml Ethanol while sterring using glass rod
- Add lemon juice while sterrting
- Then transfer the solution into the soap mould. Let the soap harder by itself at normal room temperature. Then after approximately 30-40 minutes pull out that soap from mould very carefully. the soap base is finally ready.

CHAPTER 4

RESULT AND DISCUSSION

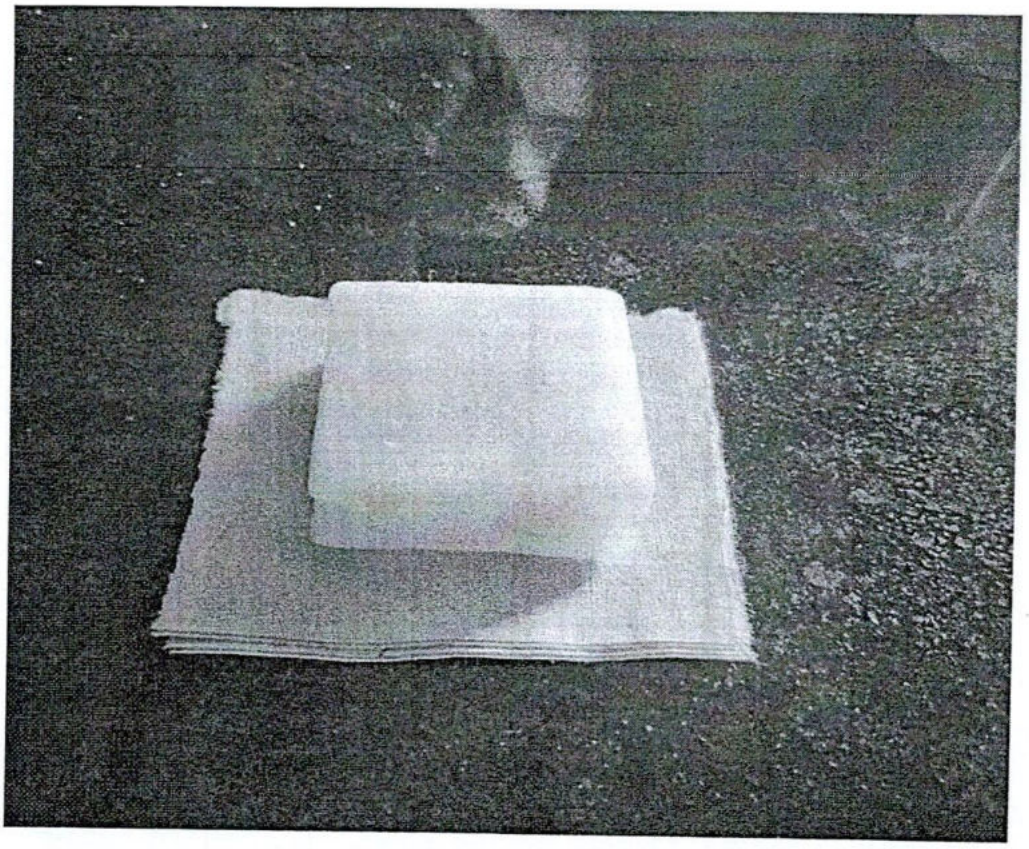
By mixture of coconut oil and aloe lemon juice and sodium hydroxide solution in proper ratio and heating the mixture followed by proper cooling we can get soap.

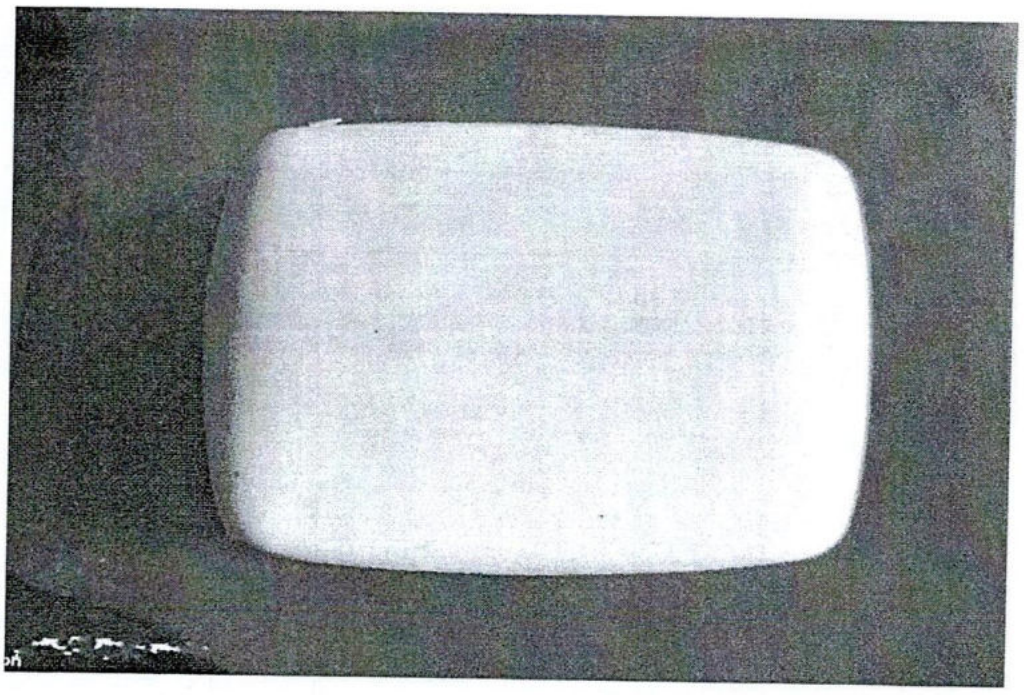
1. On heating and continuous stirring oil and sodium hydroxide solution, oil and water layers merge with each other.
2. This resulting mixture becomes thick which on adding common salt and on cooling forms a cake in moulds shaped
3. When a piece of this material is

Weight of lemon soap ;- 130gm

CHAPTER 5

IMAGES OF SOAP





CHAPTER 6

CONCLUSION

Soap was prepared using all varieties of oils including that of all the various blends of oils. The soap was tested for various properties and compared with detergents. One soap making oil in itself does not have all the properties

Soap is water soluble sodium salts of fatty acids. For making soaps, other than lemon soap, aloe Vera soap, we can also use many other fruits or natural ingredients. These soaps would have health benefits. Therefore these are natural cleansing agents having no side effects.

The soap is successfully prepared and the properties of soap are observed and recorded. The quantity of soap formed is depending upon the amount of regents used. The sodium chloride is used for the purpose of salting out and helps in crystallization of the soap. This procedure is applicable even in industrial setup.

1.6 Different types of soap making oils

Fats and oils are esters of different fatty acids and glycerol.Fats and oils are divided into three classes, fixed oils, mineral oils and essential oils. Fixed oils form the main raw materials for soap making as they decompose into fatty acids and glycerol when strongly heated, and can be easily saponified by alkali. Fixed oils, which include both animal and vegetable fats and oils, are further classified according to its physical properties as follows [13]:

a) Nut oils: These oils are characterized to be having large proportion of fatty acids with low molecular weight, especially lauric and stearic acid. Examples of these oils are coconut oil. These oils, when used in toilet soaps are the chief foam-producing ingredients.

They usually saponify easily with strong alkali solution. Once these oils have begun to saponify, the process proceeds rapidly with the evolution of heat. They require very large quantities of strong brine (1648"Be) to grain their soaps, and the grained soaps tend to carry more salt than other soaps. These oils are more suitable for the making of cold process soaps.

- **Hard fats**: The hard fats contain appreciable quantities of palmatic and stearic acids. Examples

of these oils are palm oil, animal tallow and hydrogenated fats. These oils produce slow-lathering soaps but the lather produced is more resistant over long periods of time than the nut oils. In soap making, they are first saponified with weak alkali, and in the final stages with stronger alkali solutions.

- **Soft Oils**: These oils have substantial amounts of unsaturated acids, namely oleic, linoleic and

linoleneic acids. The soap making properties of these oils vary with their fatty acid composition, and their physical and chemical properties of the acids. Examples of these kind oils are groundnut, cotton seed, fish oil and olive oil. These oils cannot produce a very hard soap when used alone for soap making. They are generally blended with nut oils. Their soaps lather freely and have very good detergent properties.

Soap making involves a definite chemical decomposition of fats and oils into their constituent parts, like fatty acids and glycerol. The fatty acids combine with little caustic soda, potash or other base forming soap, and glycerol remains free.

All fats and oils used in soap making consist of a mixture of compounds of glycerol with fatty acid which occur in nature in the form of triglycerides. The most important of these acids from the soap maker"s point of view are stearin, palmitin, olein and laurin. The presence of stearin and palmitin, which are generally solids at room temperature, gives firmness. The greater the

percentage present the harder the oil, and the higher its melting point. Where olein is liquid at ordinary temperature, is the chief constituent, the oil is soft.

The soap making properties of fats and oils can be determined by the molecular weights of their fatty acids. With increasing the molecular weight in the case of naturally occurring saturated fatty acids in fat or oil, the following properties are found

The properties of their corresponding sodium soaps vary as follows with increasing molecular weight:

- The solubility increases,
- The lathering properties improve up to lauric acid and deteriorate from lauric acid upwards,
- The stability of the lather increases,
- The detergent action decreases,
- The soaps have milder skin action as the series progresses,
- The property of holding filling solutions such as sodium silicate decreases.

This explains the reason why nut oil (such as coconut oil) soaps lather readily and profusely but not stably. They also have a firm texture and are hard but dissolve more readily in water than do soaps from the hard oils. They can also retain a good amount of water, and take up large quantities of fillers like sodium carbonate.

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3. A. G. Aaron "The complete guide to narural soapmaking" 2019

4. www.wikipedia.or

Yashwantrao Chavan College Of Science, Karad.

Department of Chemistry

CERTIFICATE

This is to certify that **Miss. Shinde Avanti Dilipkumar. (Roll No.3439)** have submited the project entitled "Determination Of Hardness And TDS Of Water From Various Water Sources" for the year 2021-22. this project is carried out under my guidance and supervision. With the best my Knowledge this original work and submitted for the degree of B.Sc.III Chemistry of Shivaji University Kolhapur.

Mr. S.D.Karande
Project guide

Prof. Dr. S.H.Burungale
Head
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30978

Yashwantrao Chavan College of Science, Karad.

Department of Chemistry .

A

Project Report On

"COMPARATIVE STUDY OF VARIOUS ANTACIDS"

SUBMITTED TO

Bachelor of Science in Chemistry

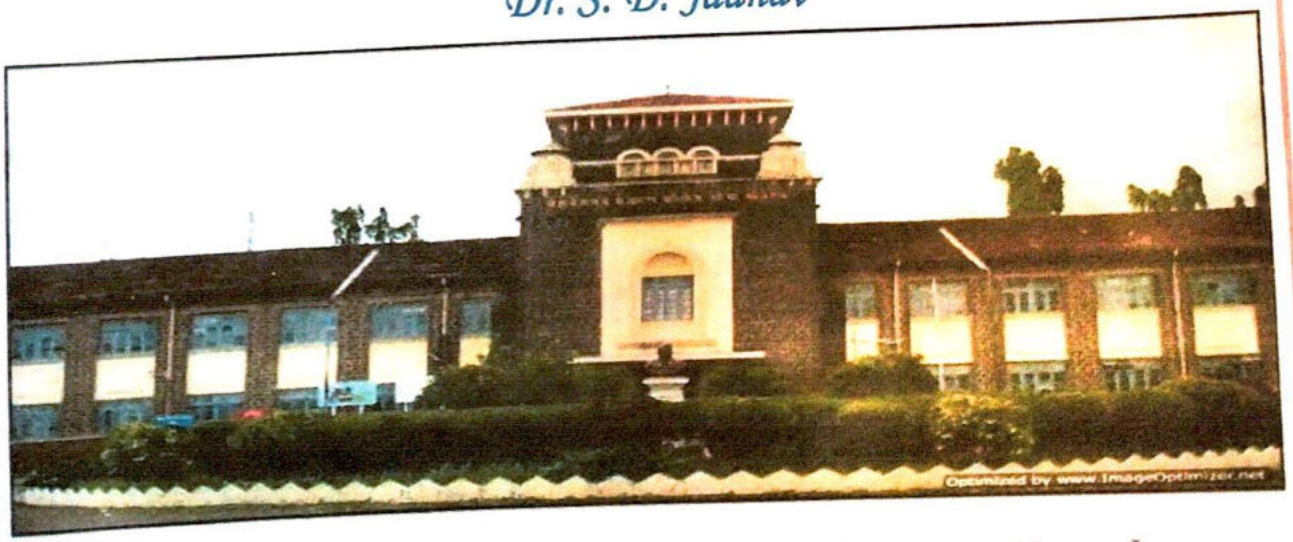
SUBMITTED BY

Miss. Shirtode Payal Chandrakant

Roll no - 3376
Seat no - 30978

UNDER THE GUIDENCE OF

Dr. S. D. Jadhav



Yashwantrao Chavan College of Science, Karad.

(2021-2022)

Yashwantrao Chavan College of Science, Karad.

Department of Chemistry

CERTIFICATE

This is to certify that,

Miss. Shirtode Payal Chandrakant 3376

have successfully completed the Project On **"COMPARATIVE STUDY OF VARIOUS ANTACIDS"** for the partial fulfillment for the award of the degree of bachelor of Science in Chemistry under my supervision as per rules and regulations of Yashwantrao Chavan College of Science, Karad affiliated to Shivaji University, Kolhapur during the academic year 2021-2022. This works present bonafied work of the students.

Dr. S. D. Jadhav
Department of Chemistry
Assistant Professor

Dr. S. H. Burungle
Head of Department
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Head
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Place : Karad.

Date :

DEPARTMENT OF CHEMISTRY

DECLARATION

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Dr. S. D. Jadhav
Project Guide

Place : Karad.

Date :

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide ***Dr. S. D. Jadhav.,*** *Assistant Professor, Department of Chemistry, for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.*

I also extend my sincere thanks to ***Dr. S. H. Burungale,*** *Head of Department of Chemistry for providing the laboratory facilities.*

My sincere thanks are due to Principal, Dr. S. B. Kengar for his constant encouragement.

I am especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this Project work.

Finally I would like to thank those who have helped directly or indirectly in completion of this Project.

Name of Student *Roll No.*

Miss. Shirtode Payal Chandrakant **3376**

Place : Karad

Date :

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Department of Chemistry

A

Project Report

On

"ANALYSIS OF NITROGEN IN FERTILIZERS"

SUBMITTED TO

Bachelor of Science in Chemistry

SUBMITTED BY

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Mr. Mali Shubham Shivaji	*Roll No. 3258*
Mr. Khot Sujit Dilip	*Roll No. 3242*
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Mr. Mali Vishal Vilas	*Roll No. 3259*
Mr. Uday Ramchandra Mane	*Roll No. 3260*
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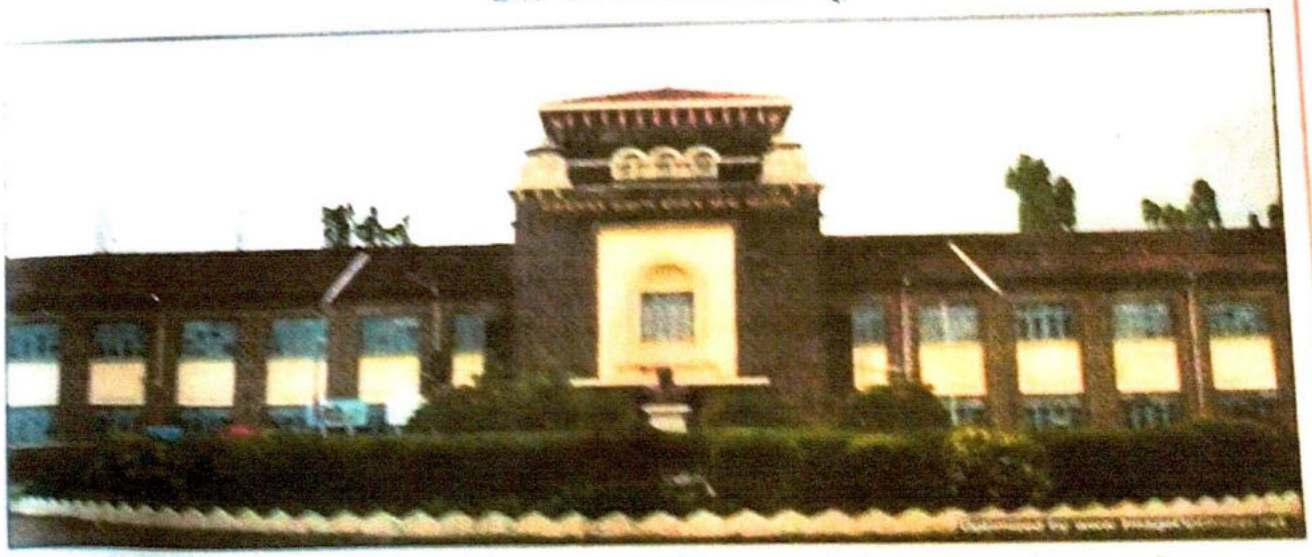
UNDER THE GUIDANCE OF

Dr. B. E. Mahadik



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Yashwantrao Chavan College of Science, Karad.

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Project Report On

"EFFECT OF COVID-19 ON ENVIRONMENT"

SUBMITTED TO

Bachelor of Science in Chemistry

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Date :

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SHIVAJI UNIVERSITY, KOLHAPUR.

B. Sc. II

2021-2022

Environmental Studies

A

PROJECT REPORT

ON

"Study of the Solid Waste Management in Karad City"

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Co-ordinator **Head of Dept.** **Principal**

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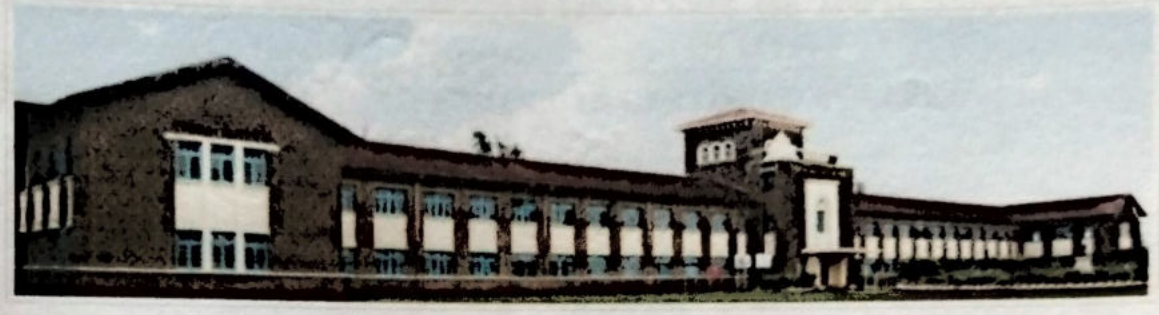

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B. SC-II

2021-2022

Environmental Studies

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"Study Of Waste Water Utilization In Karad City''

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YASHAWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD



Under Shivaji University,Kolhapur

B.sc-II

2021-2022

Environmental studies

A Project On

"To Study The Water Purification Plant In Karad city"

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SHIVAJI UNIVERSITY, KOLHAPUR.

B. Sc. III

2021-2022

Environmental Studies

A

PROJECT REPORT

ON

"Survey and Study of Polluted Water Bodies in Karad"

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2.	Mr. Shubham Pandharinath Waydande	2210	18581

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Exam Seat No. - 18579, 18581 **Date:** 03/06/2022

Roll No.- 2208/2210

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Environmental Project 2021-2022



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Yashwantrao Chavan Collage Of science , Karad

ENVIRONMENTAL STUDIES

B.Sc-II 2021-2022

A Project Report ON

Impact of Traffic in Karad City

SUBMITTED BY

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2	Sanket.S.jadhhav	2367	18584
3	Sumit. J. Jadhav	2368	18388
4	Ranjet.D. KALWE	2369	18585
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...Sanket Sambhaji Jadhav.....

...Surajit J. Jadhav.....

...Ranjet Dattatray Jadhav.....

...Pankaj Shivaji Mali.....

of B.Sc. II have completed the Environmental project satisfactorily on

"....Study of Impact of Traffic in karad city.....

....." *as prescribed by Shivaji University, Kolhapur*

as a fulfillment of syllabus during the year 2021-22.

Co-ordinator

Head of Dept.

Department of Pollution
Yashwantrao Chavan College of Science, Karad

Principal

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

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Yashwantrao Chavan Collage Of science , Karad

ENVIRONMENTAL STUDIES

B.Sc-II 2021-2022

A Project Report ON

STUDY OF PLANTS IN COLLAGE CAMPUS

SUBMITTED BY

Sr NO	Name of students	Roll No	Exam Seat NO
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3	Saurabh Pramod Sawant	2375	18587
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SHIVAJI UNIVERSITY, KOLHAPUR

Exam Seat No. - 18383, 18384, 18587, 18415 Date: 03/06/2022

Roll No.- 2372, 2373, 2375, 2376

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Reaccredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. Ajinkya Vijay Patil

Rohit Nivas Patil

Saurabh Pramod Sawant

Tejas Bhimrao Sawant

of B.Sc. II have completed the Environmental project satisfactorily on " Study of the Plants in Collage Campus *" as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2021-22.*

Co-ordinator Head of Dept. Principal

Head
Department of Pollution
Yashwantrao Chavan College of
Science, Karad

Yashwantrao Chavan College of Science * Karad * POLLUTION

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SHIVAJI SHIKSHAN SANSTHA'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, VIDYANAGAR, KARAD.



SHIVAJI UNIVERSITY, KOLHAPUR.

B. Sc. II

2021-2022

Environmental Studies

A

PROJECT REPORT

ON

"Study of Impact of Acid Rain on Asthetick Rock"

Submitted By

No.	Name	Roll No.	Exam No.
1.	Shilpa Chandrakant Talwar	2209	18580
2.	Swarali Anil Pawar	2202	18574
3.	Shinde Rutuja Ananda	2206	18578
4.	Patil Shivani Bajirao	2472	18569
5.	Sushma Bhanudas Gorave	2471	—

UNDER THE GUIDANCE OF

Prof. P. A. Patil

(M. Sc., B. Ed., BJC)

Exam Seat No. - 18580, 18574, 18569, 18578 Date: 3-6-2022

Roll No.- 2209, 2202, 2206, 2472

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Reaccredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. Shilpa Chandrakant Talwar

Swarali Anil Pawar

Rutuja Ananda Shinde

Shivani Bajirao Patil

Sushma Bhanudas Gorave

of B.Sc. II have completed the Environmental project satisfactorily on

"Study of Impact of Acid Rain on Asthetick Rock

....." *as prescribed by Shivaji University, Kolhapur*

as a fulfillment of syllabus during the year 2021-22.

Co-ordinator

Head of Dept.

Head
Department of Pollution
Yashwantrao Chavan College of
Science, Karad

Principal

Yashwantrao Chavan College of Science * Karad
POLLUTION

G-43

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

VIDYANAGAR, KARAD.

UNDER SHIVAJI UNIVERSITY, KOLHAPUR.

B.SC. II

Of the

2021-2022

Environment studies



A project report on

"SURVEY OF CAPITA CONSUMPTION OF WATER FROM RURAL AREA"

Submitted by

Sr.no.	Name of the student	Roll no.	Exam seat no.	Sign
1	Suraj Dilip Jadhav	2412	18420	SJadhav
2	Vishal Bhagwat Lohar	2418	18670	
3	Mayureshwar Hanmant Patil	2422	NOT	NOT
4	Prathamesh Vaman Salunkhe	2425	18675	PSalunkhe

Under the guidance of

Mrs.Patil P.A.(M.Sc.B.ed.BJC)

Exam Seat No. - 18420, 18670, 18675 Date: 03/06/2022

Roll No.- 2412, 2418, 2425

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Reaccredited at the B++ level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / ~~Miss.~~ Jadhav suraj dilip

Lohar vishal bhagvat

~~May~~ Patil Mayureshwar hanmant

Salunkhe prathamesh vaman

of B.Sc. II have completed the Environmental project satisfactorily on "To study survey of capita consumption of water from rural areas" *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2021-22.*

Co-ordinator

Head of Dept.

Principal

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★
POLLUTION

G38

Shivaji Shikshan Sanstha's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



UNDER SHIVAJI UNIVERSITY, KOLHAPUR

B.Sc.II

2021-2022

Environmental Studies

A

Project Report

On,

"Study Of Importance Of Vermicompost In Agriculture"

Submitted by,

Sr. No.	Name of Student	Roll no.	Exam no
1	*Mr. Shinde Shubham Jaywant*	2377	36050
2	*Mr.Bhonsle Stavan P*	2378	
3	*Mr.Sankpal Sunil Ramesh*	2379	18414
4	*Mr.Sankpal Kuldip Uttam*	2380	18413
5	*Mr.Mahadik Abhijeet Sanjay*	2381	18400

Under guidance of Patil P.A (M.sc Bed. BJC)

Exam Seat No. - 18400 Date: 14-6-22

Roll No.- 2381

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Reaccredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ...Shinde...Shubham..Jaywant.....

....Bhansle....Stavan....P.....

...Sankpal.....Sunil....Ramesh.....

....Sankpal.....Kuldip....Uttam.....

....Mahadik....Abhijeet....Sanjay.....

of B.Sc. II have completed the Environmental project satisfactorily on "...Study...of...importance...of...vermicompost...in.....

Agriculture....." *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2021-22.*

Co-ordinator Head of Dept. Principal

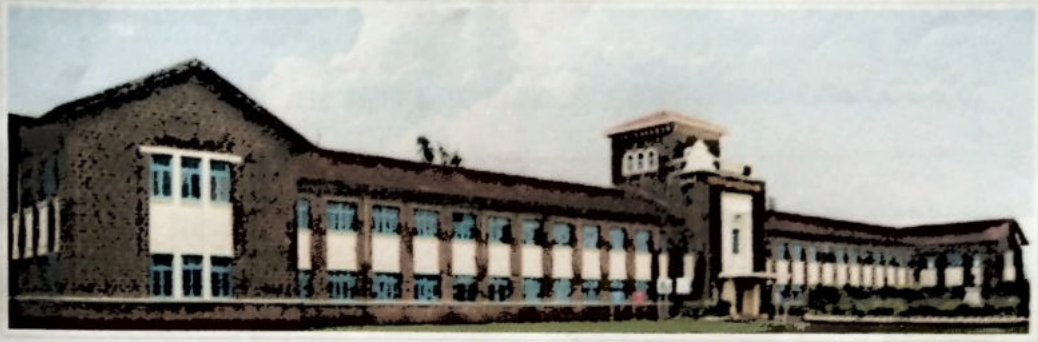
Head
Department of Pollution
Yashwantrao Chavan College of
Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

29 G.74

SHIVAJI SHIKSHAN SANSTHA'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, VIDYANAGAR, KARAD.



SHIVAJI UNIVERSITY, KOLHAPUR.

B. Sc. II

2021-2022

Environmental Studies

A

PROJECT REPORT

ON

"To study Impact of Green House Effect on Environment"

Submitted By

No.	Name	Roll No.	Exam No.
1.	Miss. Gurav Rupali Rajendra	2309	18891
2.	Miss. Jagdale Gayatri Dattatray	2311	18601
3.	Miss. Katkar Sanjana Rajesh	2315	18604
4.	Miss. Katkar Vrushali Dattatray	2316	
5.	Miss. Kolekar Piyusha Manohar	2317	18605

UNDER THE GUIDANCE OF

Prof. P. A. Patil

(M. Sc., B. Ed., BJC)

Exam Seat No. - 18391, 18601, 18604, 18605 Date: 04/06/2022

Roll No.- 2309, 2311, 2315, 2316, 2317

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE

Reaccredited at the B^{++} level by NAAC, Bangalore

Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. Gurav Rupali Rajendra
Jagadale Gayatri Dattatray
katkar Sanjana Rajesh
katkar Vrushali Dattatray
kolekar Piyusha Manohar

*of B.Sc. II have completed the Environmental project satisfactorily on "*Study of Impact of Green House Effect On Environment*" as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2021-22.*

Co-ordinator Head of Dept. Principal

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science Karad POLLUTION

SHIVAJI SHIKSHAN SANSTHA'S

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, VIDYANAGAR, KARAD.



SHIVAJI UNIVERSITY, KOLHAPUR.

B. Sc. III

2021-2022

Environmental Studies

A

PROJECT REPORT

ON

"Bio Medical Waste Management During COVID-19"

Submitted By

No.	Name	Roll No.	Exam No.
1.	Miss. Patil Sneha Anil	3692	
2.	Mr. Jadhav Akshay Uttam	3691	

UNDER THE GUIDANCE OF

Prof. P. A. Patil

(M. Sc., B. Ed., BJC)

Exam Seat No. -
Roll No.- 3692, 3691

Date:

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

AN ISO 9001:2015 CERTIFIED COLLEGE
Reg: RQ91/5237

Accredited at the B^{++} level by NAAC, Bangalore

Department of Pollution

This is to certify that Shri / Miss. Patil Sneha Anil

Mr. Jadhav Akshay Uttam

of B. Sc. III Pollution has completed Project work on

"Biomedical waste management During covid-19"

satisfactorily prescribed by Shivaji University, Kolhapur as a fulfillment of practical syllabus during the year 2021 - 2022.

Examined
02-06-2022

Teacher In-charge

Examiner

Head

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ POLLUTION

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Nikam Akansha Ashok** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation, Purification and Characterization of Bromelain enzyme from Pineapple" presents her bonafide work in B.Sc- III of the academic year 2022-2023

SSNalawade

Mrs. S.S.Nalawade
PROJECT SUPERVISOR

MUlape

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Patil Ankita Arun** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Production of Biodiesel from waste vegetable oil" presents her bonafide work in B.Sc- III of the academic year 2022-2023

SSNalawade

Mrs. S.S.Nalawade
PROJECT SUPERVISOR

MVlape

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Jadhav Anushka Santosh** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Production of preservation of sugarcane juice" presents her bonafide work in B.Sc- III of the academic year 2022-2023

Patil

Mrs. V.R. Patil
PROJECT SUPERVISOR

Mulape

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★
BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Mujawar Arsh Amir** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and characterization of protease from Leguminous seeds" presents her bonafide work in B.Sc- III of the academic year 2022-2023

AKKanase

Mrs. A.K.Kanase
PROJECT SUPERVISOR

TMulape.

EXAMINAR

SSNalawade.

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Pawar Gauri Sambhaji** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Therapeutic potential and antimicrobial effect of different species and leaf extract against various oral pathogens" presents her bonafide work in B.Sc- III of the academic year 2022-2023

AKanase.
Miss. A.K.Kanase
PROJECT SUPERVISOR

MUape.
EXAMINAR

SSNalawade.
CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Jadhav Omkar Sharad** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Selection of Biosurfactant bioemulsifier producing bacteria hydrocarbon petroleum contaminated soil " presents her bonafide work in B.Sc- III of the academic year 2022-2023

VRatil

Mrs. V.R. Patil
PROJECT SUPERVISOR

DVlape

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Shinde Pooja Dattatray** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and characterization of bacteria spot disease of citrus through biochemical approaches and its control measures " presents her bonafide work in B.Sc- III of the academic year 2022-2023

V Patil

Mrs. V.R. Patil
PROJECT SUPERVISOR

Toplape

EXAMINAR

S S Kalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Lade Piyusha Pravin** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Isolation and characterization of bacteria from solid waste and application in Bioremediation " presents her bonafide work in B.Sc- III of the academic year 2022-2023

AKanase.

Miss. A.K.Kanase
PROJECT SUPERVISOR

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Vibhute Pranali Sayaji** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Phytochemical analysis of some medicinal plants " presents her bonafide work in B.Sc- III of the academic year 2022-2023

AKanase

Miss. A.K.Kanase
PROJECT SUPERVISOR

Toulape

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad *
BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. jagadale Pranav Anandrao** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Symptomatical study on Xanthomonas Axonopodis Pv Punicae causing bacterial blight of Punica Granatum " presents her bonafide work in B.Sc- III of the academic year 2022-2023

SSNalawade

Mrs. S.S.Nalawade
PROJECT SUPERVISOR

TMulape

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Jadhav Rutuja Arun** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Recycling of tea waste for Extraction of caffeine" presents her bonafide work in B.Sc- III of the academic year 2022-2023

SSNalawade

Mrs. S.S.Nalawade
PROJECT SUPERVISOR

Mulape

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Mahanajan Sakshi Vinayak** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Production of alcohol from coconut fiber" presents her bonafide work in B.Sc- III of the academic year 2022-2023

Akanse.

Miss. A.K.Kanase
PROJECT SUPERVISOR

Mulape.

EXAMINAR

Sswalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Patil Sarthak Anandrao** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Antimicrobial activity in chicken egg white protein " presents her bonafide work in B.Sc- III of the academic year 2022-2023

VRatil
Mrs. V.R.Patil
PROJECT SUPERVISOR

Daulape
EXAMINAR

SNalawade
CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Mr. Thorat Shivtej Vishwajit** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Effective study of Bio-fertilizer on plant growth " presents her bonafide work in B.Sc- III of the academic year 2022-2023

Patil

Mrs. V.R.Patil
PROJECT SUPERVISOR

Mulape

EXAMINAR

SSNalawade

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

DEPARTMENT OF BIOTECHNOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Sawakhande Shreya Sidharth** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in practical course: project work for B.Sc. - III Biotechnology course (Opt) and his project work entitled "Amylase production on submerged fermentation by Bacillus spp " presents her bonafide work in B.Sc- III of the academic year 2022-2023

Patil

Mrs. V.R.Patil
PROJECT SUPERVISOR

Mulape.

EXAMINAR

Sawakhande.

CO-ORDINATOR

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3361

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr. Jagdale Pranav Anandrao** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

Mrs. S.S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3362

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Mujawar Arsh Amir** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

Mrs. S.S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad *
BIOTECHNOLOGY

Roll No: 3363

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Pawar Gauri Sambhaji** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

Mrs. S.S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3364

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Vibhute Pranali Sayali** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

SSNalawade.

Mrs. S.S. Nalawade

Project Guide

Mulape.

Examiner

SSNalawade.

Course Coordinator

Course Co-ordinator
Department of Biotechnology



Roll No: 3365

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Mahajan Sakshi Vinayakd** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

SSNalawade

Mrs. S.S. Nalawade

Project Guide

Mulope

Examiner

SSNalawade

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3366

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Jadhav Rutuja Arun** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

Mrs. S.S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3367

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Pooja Dattatray Shinde** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

Mrs. S.S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3368

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Anushka Santosh Jadhav** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

Mrs. S.S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3369

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Shreya Sidhart Sawakhande** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

SNalawade

Mrs. S.S. Nalawade

Project Guide

Molape

Examiner

SNalawade

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3370

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr. Thorat Shivtej Vishwajit** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

Mrs. S.S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3371

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Piyusha Pravin Lade** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

SSNalawade

Mrs. S.S. Nalawade

Project Guide

MUkape

Examiner

SSNalawade

Course Coordinator

Course Co-ordinator
Department of Biotechnology



Roll No: 3372

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **MISS. Patil Ankita Arun** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

SSNalawade

Mrs. S.S. Nalawade

Project Guide

MUlape

Examiner

SSNalawade

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3373

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr. Patil Sarthak Anandrao** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

Mrs. S.S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science ★ Karad ★ BIOTECHNOLOGY

Roll No: 3374

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Miss. Nikam Akansha ASHOK**of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

SSNalawade.

Mrs. S.S. Nalawade

Project Guide

Mulape.

Examiner

SSNalawade.

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science * Karad * BIOTECHNOLOGY

Roll No: 3375

"One with the downtrodden and the under privileged"

ShivajiShikshanSanstha, Karad

SHIVAJI UNIVERSITY, KOLHAPUR

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

KARAD

CERTIFICATE

This is certified that **Mr. Omkar Sharad Jadhav** of B.Sc.-III Biotechnology have successfully completed that the project on Entrepreneurship report in the year 2022-2023

Mrs. S.S. Nalawade

Project Guide

Examiner

Course Coordinator

Course Co-ordinator
Department of Biotechnology

Yashwantrao Chavan College of Science
BIOTECHNOLOGY
Karad

Roll No: 5001

Exam Seat N0: 04199

Date: 27/6/2023

Shri Shivaji Education Society, Karad
Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Shrutika Umesh Ayare** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work. for M. Sc. Part II (Semester IV) Microbiology course and her project work entitled **"ISOLATION AND CHARACTERISATION OF NON-SYMBIOTIC NITROGEN FIXING BACTERIAL ISOLATE FROM PADDY SOIL"** represents her bonafide work in the M. Sc. Part-II (Semester IV) of the academic year 2022-2023.

Project Supervisor

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY

Head
Department of Microbiology

Yashwantrao Chavan College of Science KARAD

Roll No : - 5003 **Date: -** 17 / 06 / **2023**

Exam Seat No: -

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Prashant Navnath Budhawale** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II(Semester- IV) Microbiology Course and this PROJECT REPORT entitled **"ISOLATION, CHARACTERIZATION AND IDENTICATION OF ENDOLITHIC BACTERIA FROM A ROCK OF KHOADSHI DAM AND TESTING ITS ANTIMICROBIAL POTENTIAL"** represents his work in the M. Sc. Part II (Semester-IV) class of the academic year 2022-23

PROJECT GUIDE

HEAD

DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

HEAD
DEPARTMENT OF MICROBIOLOGY

Roll No : - 5004

Exam Seat No: -

Date: 27/06/2023

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss Gayatri Shivanand Chavan** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II (Semester- IV) Microbiology Course and this PROJECT REPORT entitled "**ISOLATION CHARACTERIZATION SCREENING OF CELLULOSE DEGRADING BACTERIA AND OPTIMIZATION OF CELLULASE ENZYME**" represents her work in the M. Sc. Part II (Semester-IV) class of the academic year 2022-23.

Project guide

Examiner

Head

Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science KARAD

Roll No:-5006

Date: 28-06-2023

Exam Seat No. 04208

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Prasad Bajarang Hasole** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his project work entitled "**Isolation and characterization of 2, 4 Dichlorohydroxyacetic acid degrading bacteria from sugarcane soil**" represents his work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Supervisor

(Dr. B. B. Ballal)

HEAD
DEPARTMENT OF MICROBIOLOGY
Department of Microbiology

Yashwantrao Chavan College of Science *KARAD*

ROLL NO : - 5005 **Date- 28/06/23**

EXAM NO :- 4206

Shri Shivaji Education Society', Karad

Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE , KARAD.

DEPARTMENT OF MICROBIOLOGY

LABORATORY CERTIFICATE

This is to certify that **Miss. Etam Pranjal Prakash** has satisfactorily carried out the required Project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part-II Semester IV Microbiology Course and her **PROJECT REPORT** entitled in **"ISOLATION, IDENTIFICATION AND CHARACTERIZATION OF PROBIOTIC BACTERIA FROM *RASTRELIGUER KANAGURTA* (INDIAN MACKREAL)** represents her bonfires work in M .Sc Part-II (Semester-IV) of academic year 2022- 2023

Miss. K.A.Yadav
Project Supervisor

Examiner

D. D. Patil
Head of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Roll No:-5008

Exam Seat No.:

Date: 28/06/2023

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Darshan DadasahebIngale** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his project work entitled **"Isolation and characterization of diesel Engine Oil Degrading Bacteria from Garage Soil"** represents his bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Supervisor

Head

Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Roll No : - 5011

Exam Seat No : - 4213

Date: - 28 / 6 / 2023

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is certify that **Miss. Mayuri Ananda Kambale** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in **PRACTICAL COURSE VIII**: project work for the M.Sc. part-II (Semester-IV) Microbiology course and his PROJECT REPORT entitled **"ISOLATION AND CHARACTERISATION OF NAPHTHALENE DEGRADING BACTERIA FROM GARAGE SOIL"** represents her bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Dr. J. U. Patil
PROJECT GUIDE

Dr. B. B. Bajad
Examiner

HEAD
HEAD
DEPARTMENT OF MICROBIOLOGY
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Roll No: 5012

Date: 27-06-2023

Exam Seat No: 4214

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Arundhati Avinash Kamble** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M. Sc. Part II (Semester IV) Microbiology course and her project work entitled "**Isolation and characterization of potassium solubilizing bacteria from the paddy field of Saidapur, Karad**" represents her bonafide work in the M. Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Supervisor

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY

Head
Department of Microbiology

Yashwantrao Chavan College of Science * KARAD *

Roll No:-5013

Date: 27-06-2023

Exam Seat No. 04217

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OFSCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Ms. Radhika Rahul Kavade** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her project work entitled "Isolation and Characterization of Amylase Producing Bacteria from soil from *Cajanus cajan* plant" represents her bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Supervisor

Examiner

Head

HEAD
DEPARTMENT OF MICROBIOLOGY
Department of Microbiology

Yashwantrao Chavan College of Science * KARAD *

Roll No : - 5014 **Date: - 27 / 6 / 2023**

Exam Seat No : - 4195

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is certify that **Mr. Kharat Samadhan Anil** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur in **PRACTICAL COURSE VIII**: project work for the M.Sc. part-II (Semester-IV) Microbiology course and his PROJECT REPORT entitled **"Isolation and Characterization of Bacterial blight disease causing pathogen from Pomegranate fruits"** represents his bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023

PROJECT GUIDE

HEAD

DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

HEAD
DEPARTMENT OF MICROBIOLOGY

Roll No : - 5015 Date: - 28 / 06 / 2023

Exam Seat No : - 04220

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Pratiksha Mahipati Magadum** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II (Semester- IV) Microbiology Course and this PROJECT REPORT entitled **"ISOLATION AND CHARACTERIZATION OF EXOPOLYSACCHARIDE PRODUCING BACTERIA FROM SUGARCANE FIELD SOIL"** represents her work in the M. Sc.Part II (Semester-IV) class of the academic year 2022-23.

Dr . J .U . Patil

PROJECT GUIDE **EXAMINER** **HEAD**

HEAD
DEPARTMENT OF MICROBIOLOGY

DEPARTMENT OF MICROBIOLOGY

Roll No : - 5017 **Date:** - 28/06/2023

Exam Seat No : -

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Swapnali Madhukar Mali.** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II (Semester- IV) Microbiology Course and this PROJECT REPORT entitled "**To Synthesize The Silver Nanoparticles By Using *Psidium Guajava* (Guava) Peel And Plant Leaf Extract And Observe Its Antimicrobial Activity And Its Applications.**Represents her work in the M. Sc. Part II (Semester-IV) class of the academic year 2022-23

PROJECT GUIDE **HEAD**

DEPARTMENT OF MICROBIOLOGY

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Roll No : - 5018 **Date: - 28 / 06 / 2023**

Exam Seat No : - 04224

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mrs. Ayesha Musa Mulani** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II (Semester- IV) Microbiology Course and this PROJECT REPORT entitled **" ISOLATION AND CHARACTERIZATION 0F PECTINASE FROM PECTINOLYTIC BACTERIA"** represents her work in the M. Sc. Part II (Semester-IV) class of the academic year 2022-23.

Dr. J. U. Patil

PROJECT GUIDE **EXAMINER** **HEAD**

HEAD
DEPARTMENT OF MICROBIOLOGY

DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

ROLL NO: 5019 Date: 28/6/2023

EXAM SEAT NO: 4226

Shri Shivaji Education Society, Karad

Board of Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology

Laboratory Certificate

This is to certify that **MISS. SHIVANI DILIP NAGANE** has satisfactorily carried out the required project work prescribed by Shivaji University, Kolhapur in Practical Course -VIII: project work for M.Sc. II (Semester IV) Microbiology course & her project report entitled **"SCREENING OF ZINC SOLUBILIZING BACTERIA FROM SOIL"** represents her work in M.Sc. II (semester IV) class of academic year 2022-2023.

Project Guide Examiner Head of Department

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Roll No: - 5020 Date: 28/06/23

Exam Seat No. 04429

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Abhay Bajirao Patil** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his project work entitled "**Isolation and Characterization of lead resistance bacteria and it's potential for bioremediation of contaminated soil**" represents his bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Supervisor **Examiner** **Head**

HEAD
DEPARTMENT OF MICROBIOLOGY

Department of Microbiology

Yashwantrao Chavan College of Science *KARAD*

Roll No: 5021

Date: 25/06/2023

Exam Seat No: 04230

Shri. Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Ms. Pragati Sanjay Patil** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her project work entitled "**Isolation and Characterization of Amylase Producing Bacteria from Sugarcane Field and studies on their Amylase**" represents her bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Supervisor

Examiner

Head
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

ROLL NO:- 5022

DATE:- 28/05/2023

EXAM SEAT NO:- 4231

Shri Shivaji Education Society, Karad

Board For Higher Education's

Yashwantrao Chavan College of Science Karad.

Department of Microbiology.

Laboratory certificate

This is to certify that Miss **Priyanka Shrikant Patil** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as **"Studies on Isolation and characterization of dye degrading bacteria from river water"** represents her work in the M.Sc. II (Semester-IV) of the academic year 2022-2023.

Project Guide

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY
Head of Department

Yashwantrao Chavan College of Science KARAD

Roll No : - 5023 **Date: 28/6/ 2023**

Exam Seat No: - 04239

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Tanjum Ibrahim Satarmaker** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II (Semester- IV) Microbiology Course and this PROJECT REPORT entitled "**ISOLATION CHARACTERIZATION SCREENING OF CELLULOSE DEGRADING BACTERIA FROM RHIZOSPERIC SOIL OF *Cajanus cajan* AND OPTIMIZATION OF CELLULASE ENZYME"** represents her work in the M. Sc. Part II (Semester-IV) class of the academic year 2022-23.

Project guide **Examiner** **Head**

Yashwantrao Chavan College of Science KARAD

HEAD
DEPARTMENT OF MICROBIOLOGY

Department of Microbiology

Roll No : - 5023 **Date:- / / 2023**

Exam Seat No: -

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Tanjum Ibrahim Satarmaker** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II (Semester- IV) Microbiology Course and this PROJECT REPORT entitled "**ISOLATION CHARACTERIZATION SCREENING OF CELLULOSE DEGRADING BACTERIA FROM RHIZOSPERIC SOIL OF *Cajanus cajan* AND OPTIMIZATION OF CELLULASE ENZYME"** represents her work in the M. Sc. Part II (Semester-IV) class of the academic year 2022-23.

Project guide **Examiner** **Head**

Yashwantrao Chavan College of Science * KARAD *

Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Roll No: 5024 **Date:** 27-6-23

Exam Seat No: 04241

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Tejaswini Subhash Shinde** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M. Sc. Part II (Semester IV) Microbiology course and her project work entitled **"Isolation of siderophore producing bacteria from soil sample"** represents her bonafide work in the M. Sc. Part-II (Semester IV) of the academic year 2022-2023.

Project Supervisor **Examiner** **Head**
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science *KARAD*

Roll No: -5025 **Date:** 27/6/2023

Exam Seat No: 04242

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Yukta Yuvraj Shinde** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work. for M.Sc. Part II (Semester IV) Microbiology course and her project work entitled **"Isolation and Characterization of Detergent Degrading Bacteria"** represents her bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Assi.Prof. K. A. Yadav
Project Supervisor

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY
Head
Department of Microbiology

Yashwantrao Chavan College of Science * KARAD *

Roll No:-5026 **Date:** 28/06/23

Exam Seat No: 04245

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Miss Wategaonkar Swapnali Nivrutti has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work. for M.Sc. Part II (Semester IV) Microbiology course and his project work entitled "ISOLATION AND CHARACTERISATION OF POLYHYDROXYBUTARATE (PHB) PRODUCING MICROORGANISM ISOLATED FROM AGRICULTURAL WASTE" represents his bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Prof. J.U. Patil
Project supervisior

Examiner

Head
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

ROLL NO.:- 5028.

DATE:- 27/6/2023

EXAM NO.:- 4198

Shri. Shivaji Education Society, Karad

Board For Higher Education's

Yashwantrao Chavan College of Science, Karad

Department of Microbiology.

Laboratory certificate

This is to certify that **Miss. Vaibhavi Sagar Ambale** has satisfactory carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her Project Work entitled as "**Studies on Phorate degrading bacteria from sugarcane field**" represents her work in the M.Sc. II (Semester-IV) of the academic year 2022 - 2023.

Project Guide

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY

Head of Department

Yashwantrao Chavan College of Science * KARAD *

Roll No : - 5029 **Date: - 27/06/ 2023**

Exam Seat No : -04200

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Belekar Prasad Vishwanath** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work. for M.Sc. Part II (Semester IV) Microbiology course and his project work entitled **"Isolation, Characterization And Screening Of Amino Acid Producing Bacteria From Cow Dung"**_represents his bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Dr. J. U. Patil
Project Supervisor

Dr. B. B. Ballal
Examiner

Dr. J. U. Patil
Head
Department Of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Roll No: 5030

Date: 28-6-23

Exam Seat No: 04204

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that Mr. Omkar Shashikant Chougale. has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work. for M.Sc. Part II (Semester IV) Microbiology course and his project work entitled **"Isolation and Characterisation of Endolithic bacteria from rock of Sadashiv Gad, Ogalewadi"** represents his bonafide work in the M.Sc. Part-II (Semester IV) of the academic year 2022-2023.

Project Supervisor

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY
Head,
Department of Microbiology

Yashwantrao Chavan College of Science * KARAD *

Roll No : 5031 **Date : 28/6/2023**

Seat No : 04205

Shri Shivaji Education Society , Karad

Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,

VIDYANAGAR , KARAD

DEPARTMENT OF MCROBIOLOGY

Laboratory Certificate

This is to certify that **Miss. Manasi Naresh Deshmukh** has carried out the required project work prescribed by the Shivaji University, Kolhapur in Practical Course VIII : Project Work for M.Sc Part II (Semester IV) Microbiology course and her Project Work entitled as **"Isolation, Identification and Characterisation of Paint Degrading Bacteria from Wall Scrappings"** represents her work in the M.Sc II (Semester IV) of the academic year 2022 – 2023.

Dr. J. U. Patil
Project Guide

Examiner

Head,
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Chavan College of Science *Yashwantrao *KARAD

Roll No:-5032

Date: 27/06/2023

Exam Seat No:- 04194

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Monali Anil Gholap** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her project work entitled **"Isolation and Characterization of Invertase Producing Yeast from Sugarcane and Grapes Juice"** represents her bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Supervisor **Examiner** **Head**

HEAD
DEPARTMENT OF MICROBIOLOGY
Department of Microbiology

Yashwantrao Chavan College of Science * KARAD *

Roll No:-5035

Date: 28/6/2023

Exam Seat No.:- 04216

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. MRUNALI BABURAV KAMBLE** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and her project work entitled "**ISOLTION AND CHARACTERIZATION OF BIOSURFACTANT PRODUCING BACTERIA FROM GARAGE SOIL**" represents her bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Superviser

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY

Head of Microbiology

Yashwantrao Chavan College of Science * KARAD *

Exam Seat No: 4236

Date: 28/06/2023

Roll No: 5047

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department Of Microbiology

LABORATORY CERTIFICATE

This to certify that Miss. **SNEHA SANJAY RAJEGAONKAR** has satisfactory carried out the required project work prescribed by Shivaji University, Kolhapur in PRACTICAL COURSE-VIII PROJECT WORK for the M.Sc. Part-II (SEMESTER-IV) Microbiology course and her PROJECT REPORT entitled "**ISOLATION AND CHARACTERIZATION OF GIBBERELLIC ACID PRODUCING BACTERIA** " represents her work in the M.Sc. Part-II (SEMESTER IV) class of the academic year 2022-2023.

Project Guide

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY

Head of Department

Yashwantrao Chavan College of Science * KARAD *

Roll No:-5037

Date: 27/6/2023

Exam Seat No: 04219

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Viresh Vijay Kumbhar** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work. for M.Sc. Part II (Semester IV) Microbiology course and his project work entitled **"Effect of Electromagnetic Radiation of Mobile Waves on Growth of Microorganisms"** represents his bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Asst.Prof. Miss K. A.Yadav
Project Supervisor

Examiner

Head
DEPARTMENT OF MICROBIOLOGY
Department of Microbiology

Yashwantrao Chavan College of Science *KARAD*

Roll No : - 5038 **Date: -** 28/ 06 / **2023**

Exam Seat No : - 4223

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Mujawar Aiman Tanveer** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II (Semester-IV) Microbiology Course and this PROJECT REPORT entitled " **ISOLATION, IDENTIFICATION AND CHARACTERIZATION OF OIL DEGRADING BACTERIA FROM SOIL SAMPLE AND PHOSPHATE SOLUBLIZING AND EXOPOLYSACCHARID PRODUCING ASSAY** represents her work in the M. Sc. Part II (Semester-IV) class of the academic year 2022-23

PROJECT GUIDE **EXAMINER** **HEAD OF DEPARTMENT**

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Roll No:-5039

Date: 28/06/2023

Exam Seat No.-04225

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Rameshwar Balaji Munde** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his project work entitled "**Primary Screening of 2, 4-diacetyl Phloroglucinol Producing Bacteria from Rhizospheric soil of Rice in Saidapur, Karad**" represents his bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Supervisor

Examinee

HEAD
Head
DEPARTMENT OF MICROBIOLOGY
Department of Microbiology

Yashwantrao Chavan College of Science *KARAD*

Roll No: 5041 **Date:** 27/06/2023

Exam Seat No :04227

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Naikwadi Fiza Aftab** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his project work entitled "**Isolation and characterization of lipase and protease producing bacteria**" represents his bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Asst.Prof.Miss K. A. Yadav
Project Supervisor

Examiner

Head
Department of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science ✲ KARAD ✲

Roll No :- 5042

Exam Seat No:- 042228

Date:- 04/07/2023

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Rushikesh Anil Nangare** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II (Semester-IV) Microbiology Course and this PROJECT REPORT entitled **"ISOLATION, IDENTIFICATION AND CHARACTERIZATION OF PIGMENT PRODUCING BACTERIA FROM STAGNANT WATER AND THEIR ANTIMICROBIAL POTENTIAL"** represents his work in the M. Sc. Part II (Semester-IV) class of the academic year **2022-23.**

Dr. J. U. Patil

PROJECT GUIDE

HEAD

HEAD
DEPARTMENT OF MICROBIOLOGY

DEPARTMENT OF MICROBIOLOGY

EXAMINER

Yashwantrao Chavan College of Science * KARAD *

Roll No : - 5043

Date: - 26/6/ 2023

Exam Seat No : 04232

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Rajnandini Rangarao Patil** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II (Semester- IV) Microbiology Course and this PROJECT REPORT entitled **"BIOSYNTHESIS OF SILVER NANOPARTICLES BY MICROORGANISMS ISOLATED FROM JEWELERY WASTE"** represents her work in the M. Sc. Part II (Semester-IV) class of the academic year 2022-23.

PROJECT GUIDE

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Roll No :- 5044 Date: - 04/ 07 / 2023

Exam Seat No : - 4238

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Saloni Mahesh Patil.** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II (Semester-IV) Microbiology Course and this PROJECT REPORT entitled "**ISOLATION AND CHARACTERIZATION OF PIGMENT PRODUCING BACTERIA FROM GARDEN SOIL AND THEIR APPLICATION**" represents his work in the M. Sc. Part II (Semester-IV) class of the academic year **2022-23.**

PROJECT GUIDE

HEAD

HEAD
DEPARTMENT OF MICROBIOLOGY

DEPARTMENT OF MICROBIOLOGY

EXAMINER

Yashwantrao Chavan College of Science * KARAD *

Roll No:-5045 Date: 27/06/2023

Exam Seat No:- ~~27/06/2023~~ 04234

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Shardul Abhijit Patil** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work. For M.Sc. Part II (Semester IV) Microbiology course and his project work entitled **"STUDY OF ANTIMICROBIAL ACTIVITY OF PHENAZINE-1-CARBOXYLIC ACID PRODUCING *Pseudomonas fluorescence*"** represents his bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Supervisor Examiner HEAD DEPARTMENT OF MICROBIOLOGY **Head**

Department Of Microbiology

Yashwantrao Chavan College of Science *KARAD*

Roll NO : - 5046 **Date: - 27 / 06 / 2023**
Exam Seat No: - 04221

Shri Shivaji Education Society

Board for Higher Education's
Yashwantrao Chavan College of Science, Karad.

Department of Microbiology
LABORATORY CERTIFICATE

This is to certify that **Miss.Pragati Bhimrao Mali** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II (Semester- IV) Microbiology Course and this PROJECT REPORT entitled " **ISOLATION AND CHARACTERIZATION OF KERATIN DEGRADING BACTERIA FROM POULTRY SOIL.** "represents her work in the M. Sc. Part II (Semester-IV) class of the academic year2022-23

Dr.J.U.Patil.

PROJECT GUIDE

Examinar

Dr. J. U. Patil
HEAD
DEPARTMENT OF MICROBIOLOGY
HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Roll No:-5048

Date: 28/06/2023

Exam Seat No.4237

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Mr. Tushar Umesh Sangalge** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M.Sc. Part II (Semester IV) Microbiology course and his project work entitled **"Isolation and characterization of gelatin hydrolyzing bacteria from soil sample"** represents his bonafide work in the M.Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Supervisor **Examiner**

HEAD
DEPARTMENT OF MICROBIOLOGY
Department of Microbiology

Yashwantrao Chavan College of Science * KARAD *

ROLL NO: 5049
EXAM SEAT NO: 04238

Date: 27-06-2023

Shri Shivaji Education Society, Karad
Board of Higher Education's
Yashwantrao Chavan College of Science, Karad
Department of Microbiology

Laboratory Certificate

This is to certify that **MISS. RUTUJA MAHAVIR SANGAME** has satisfactorily carried out the required work prescribed by Shivaji University, Kolhapur, in Practical Course VIII: Project Work for M.Sc. II (Semester IV) Microbiology Course, and her project report entitled **"Screening and Isolation of Indol,3-Acetic Acid Producing Bacteria from Rhizospheric Soil"** represents her bona fide work in M.Sc. II (Semester IV) classes of the academic year 2022-2023.

PROJECT GUIDE

EXAMINER

HEAD
DEPARTMENT OF MICROBIOLOGY
HEAD OF DEPARTMENT

Yashwantrao Chavan College of Science *KARAD*

Roll No: 5050 Date : 27/6/2023

Exam seat No: - 4240

Shri Shivaji Education Society, Karad

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad

Department Of Microbiology

LABORATORY CERTIFICATE

This to certify that Miss. **VAISHNAVI MURALIDHAR SHANBHAG** has satisfactory carried out the required project work prescribed by Shivaji University, Kolhapur in PRACTICAL COURSE-VIII PROJECT WORK for the M. Sc. Part-II (SEMESTER-IV) Microbiology course and her PROJECT REPORT entitled **"Optimization of Indole Acetic Acid producing bacteria from rhizospheric soil from *Cajanus cajan* plant, "** represents her work in the M. Sc. Part-II (SEMESTER IV) class of the academic year 2022-2023.

Project Guide **Examiner** **Head of the Department**

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Roll No : - 5051

Date: - 27 / 6 / 2023

Exam Seat No : - 4243

Shri Shivaji Education Society

Board for Higher Education's

Yashwantrao Chavan College of Science, Karad.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Rutuja Sawanta Tupe** has carried out the require project work prescribed by the Shivaji University, Kolhapur in PRACTICAL COURSE VIII: Project Work for the M.Sc. Part II(Semester- IV) Microbiology Course and this PROJECT REPORT entitled **" ISOLATION, IDENTIFICATION AND CHARACTERIZATION OF CHITIN DEGRADING BACTERIA FROM SOIL"** represents her work in the M. Sc. Part II (Semester-IV) class of the academic year 2022-23

PROJECT GUIDE

Examiner

HEAD
DEPARTMENT OF MICROBIOLOGY
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Roll No:-5052 **Date:**

Exam Seat No: 04244

Shri Shivaji Education Society, Karad

Board for Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of Microbiology

LABORATORY CERTIFICATE

This is to certify that **Miss. Nilam Ananda Varute** has satisfactorily carried out the required project work prescribed by the Shivaji University, Kolhapur, in Practical course VIII: Project work for M. Sc. Part II (Semester IV) Microbiology course and her project work entitled **"Isolation and characterization of lipase producing organisms isolated from oil contaminated soil"** represents her bonafide work in the M. Sc. Part-II (Semester-IV) of the academic year 2022-2023.

Project Supervisor **Examiner** **Head**
Department Of Microbiology

HEAD
DEPARTMENT OF MICROBIOLOGY

Yashwantrao Chavan College of Science * KARAD *

Shivaji University Kolhapur

Affiliated to

Yashwantrao Chavan College of Science, Karad

Department of Botany

Project on

"STUDIES OF EFFECT OF MUTAGEN ON *WITHANIA SOMNIFERA* (L.) DUNAL"

A project submitted during the degree of Master of Science in Botany

by

Mr. Sammed Sanjay Mallewade

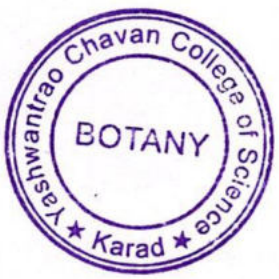
Under the supervision of

Dr. S. A. Kirtane

Department of Botany,

Yashwantrao Chavan College of Science, Karad

2022-2023



Exam. Seat No. 04249 Date: 08/06/2023

Roll No.- 5002

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

Accredited at the B^{++} level by NAAC, Bangalore

Department of Botany

CERTIFICATE

This is to certify that ***Mr. Sammed Sanjay Mallewade***

of M. Sc. IIBotany has completed Project work based on Special paper entitled

'STUDIES OF EFFECT OF MUTAGEN ON *WITHANIA SOMNIFERA*'

The project is satisfactorily completed as prescribed by ***Shivaji University, Kolhapur*** *for fulfilment of practical syllabus during the year* ***2022 - 2023.***

Teacher In-charge

Examiner

Head Department of Botany

Head
Department of Botany
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

Shivaji University, Kolhapur

Yashwantrao Chavan College of Science, Karad

Affiliated to

Department of Botany
Project on

'Morphological and Physiological characteristics analysis of Capsicum annuum'

A Project submitted during the degree of Master of Science in Botany By

Miss. Rutuja Hambirrao Patil.

Under the supervision of

Dr. S.A.Kirtane

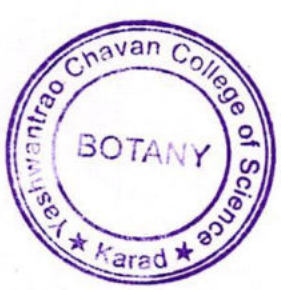
Department of Botany,

Yashwantrao Chavan College of Science, Karad.

2023

Exam seat No. 4246 Date: 8/6/23

Roll No. 5004



Shri Shivaji Education Society Karad, Board of Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad–415 124

Accredited at the B++ level by NAAC, Bangalore

Department of Botany

CERTIFICATE

This is certify that Miss. Rutuja Hambirrao Patil *of* M.Sc.II Botany *has* 'Morphological and Physiological characteristics analysis of Capsicum annuum' *completed project work based on Special paper entitled satisfactorily as prescribed by Shivaji University, Kolhapur for fulfilment of syllabus during the year 2022-2023.*

Teacher in-charge

Examiner

Head

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

Department of Botany

Head
Department of Botany
Yashwantrao Chavan College of
Science, Karad

Shivaji University, Kolhapur

Yashwantrao Chavan College of Science, Karad

Affiliated to

Department of Botany

Project on

'Morphological and physiological characteristics analysis of coriander (coriander sativum)'

A project submitted during the degree of

Master of Science in Botany

by

Mr. Patil Sanket Gunvant

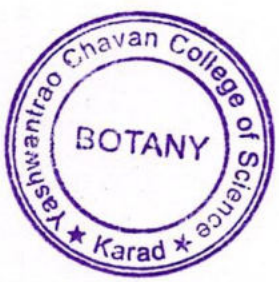
Under the supervision of

Dr. S. A. Kirtane

Department of Botany,

Yashwantrao Chavan College of Science, Karad,

2023



Exam.Seat No. : 04247

Roll No – 5005

Date: 8/6/23

Shri shivaji Education Society karad, Bord for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad-415 124

Accredited at the B++ level by NAAC, Bangalore

Department of Botany

CERTIFICATE

This is to certify that Mr. Sanket Gunvant Patilof M. Sc. II Botany has **'Morphological and physiological characteristics analysis of coriander (coriander sativum)'**.completed Project work based on Special paper entitied satisfactorily as presumcribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2022-2023

Teacher In-charge

Examiner

Head

Department Of Botany

Head
Department of Botany
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

A PROJECT REPORT

"To studies in variety differences with respect to vegetative and physiological characters of *Spinacia olracea* L."

A project report submitted during the degree of Master of Science in Botany

To

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE ,KARAD.

DIST - SATARA

Affiliated to

SHIVAJI UNIVERSITY , KOLHAPUR.

Under guidance of

Dr. S. A. Kirtane (M.Sc. Ph.D.)

Assistant Professor

Department of Botany

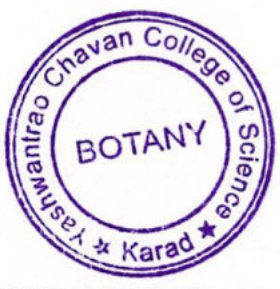
Yashwantrao Chavan College Of Science,Karad

By

Miss .Poonam Raghunath Suryawanshi

Department of Botany

Yashwantrao Chavan College Of Science, karad.



April 2023

Exam Seat No. : 4248

Roll No 4408 **Date :** 8/6/23

Shri Shivaji Education Society Karad, Board of Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE KARAD

Department of Botany

CERTIFICATE

This is to certify that **Miss. Poonam Raghunath Suryawanshi** Student of M. Sc. II – Botany has **"To Studies in variety differences with respect to vegetative and physiological Characters of *Spinacia olracea* L."** Completed Project work based on special paper satisfactorily is prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2022 – 2023

Teacher in – charge **Examiner** **Head of Department**

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

Head
Department of Botany
Yashwantrao Chavan College of
Science, Karad

Shivaji University, Kolhapur

Affiliated to

Yashwantrao Chavan College of Science, Karad

Department of Botany

Project on

"EFFECT OF SODIUM AZIDE (SA) TO STUDY CYTOLOGY AND PHYSIOLOGY IN *NIGELLA SATIVA* (L.)"

A project submitted during the degree of Master of Science in Botany by

Miss. Nilima Deepakkumar Vora

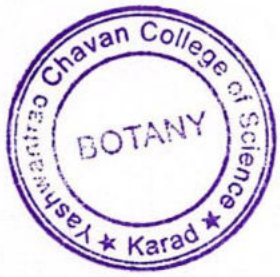
Under the supervision of

Dr. S. A. Kirtane

Department of Botany,

Yashwantrao Chavan College of Science, Karad.

2023



Exam. Seat No. 4250 **Date:** 8/6/23

Roll No.- 5008

Shri Shivaji Education Society Karad, Board for Higher Education's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Vidyanagar, Karad – 415 124

Accredited at the B^{++} level by NAAC, Bangalore

Department of Botany

CERTIFICATE

This is to certify that ***Miss. Nilima Deepakkumar Vora*** *of M. Sc. II Botany has completed Project work based on Special paper entitled* **'Effect of Sodium Azide (SA) to study cytology and physiology on seed of *Nigella sativa* (L.)'**

The project is satisfactorily completed as prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2022 - 2023.

Teacher

In-charge

Examiner

Head

Department of Botany

Yashwantrao Chavan College of Science, Karad BOTANY

Head
Department of Botany
Yashwantrao Chavan College of Science, Karad

A PROJECT REPORT

Cytotoxic and Clastogenic Effect of Oxyfluorfen, Mancozeb and Fipronil on root tip meristem of *Allium cepa* L.

A project report submitted during the degree of Master of Science in Botany

To

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.
DIST – SATARA

Affiliated to

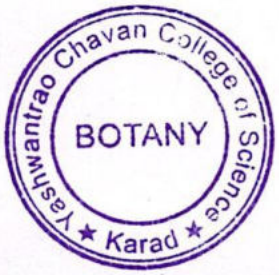
SHIVAJI UNIVERSITY, KOLHAPUR.

Under guidance of

Dr. S. A. Kirtane (M. Sc. Ph. D.)
Assistant Professor
Department of Botany
Yashwantrao Chavan College of Science, Karad.

By

Miss. Sukanya Chandrakant Yadav
Department of Botany
Yashwantrao Chavan College of Science, Karad.



April 2023

Exam seat no.

Roll no. 4410

Date : 8/6/23

Shri Shivaji Education Society Karad, Board of Higher Education

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.

Department of Botany

CERTIFICATE

This is to certify that Miss. Sukanya Chandrakant Yadav student of M. Sc. II – Botany has **Cytotoxic and Clastogenic Effect of Oxyfluorfen, Mancozeb and Fipronil on root tip meristem of *Allium cepa* L.** completed project work based on special paper satisfactorily as prescribed by Shivaji University, Kolhapur for fulfillment of practical syllabus during the year 2022 – 2023.

Teacher In-Charge

Examiner

Head of Department

Head
Department of Botany
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ BOTANY

CERTIFICATE

This is certify that Miss Nayan Rajendra Mane has satisfactirly carried out project work on Golden Polygons And Golden Curves Mathematics.

Prescribed by the Shivaji University Kolhapur for the B.Sc. III Mathematics (2022 – 2023)

Teacher In Charge

16/05/23

Examiner

Head Of Department

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

CERTIFICATE

This is certify that Miss Sayali Sanjay Nangare has satisfactirly carried out project work on Fourier Series In Mathematics Prescribed by the Shivaji University Kolhapur for the B.Sc. III Mathematics (2022 – 2023)

Teacher In Charge

Examiner

Head Of Department

for

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

CERTIFICATE

This is certify that Miss Jadhav punam Ashokraohas satisfactirly carried out projectwork on "Pascal's Triangle".

Prescribed by the Shivaji University Kolhapur for the B.Sc. III Mathematics (2023 – 2024)

Teacher In Charge

Examiner

Head Of Department

Yashwantrao Chavan College of Science ★ Karad ★ MATHEMATICS

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE WATCH SHOPPING** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **MORE PRIYANKA SATISH and SAWANT SNEHAL SAMPAT** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place : Karad

Date : 10-5-2023

Mrs V. A. Mali

(Project Guide)

Assistant Professor

Department Of Computer Science

Yashwantaro Chavan College Of Science, Karad

Evaluated
17.05.23

External Examiner/s

Yashwantrao Chavan College of Science
COMPUTER SCIENCE
Karad

(Shri. A. A. Mulla)

Head Of Department Computer Science

Yashwantaro Chavan College Of Science, Karad

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Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled E-Visa Processing Management System being submitted here with for the award of **BATCHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **Rohan Santosh Khatavkar** and **Niranjan Jagannath Raut** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 10/05/2023

Mrs. S.G.Padyal

(Project Guide)

Assistant Professor,

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

External Examiner/s:-

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

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Department Of Computer Science

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Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGEOF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE GIRLS FASHION CORNER** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **Shravani Pandharinath Chavan and Sunita Jyotiba Ghorapade** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place : Karad

Date : 10/05/2023

Prof. S. G. Padyal

(Project Guide)

Assistant Professor,

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Evaluated

17.05.23

External Examiner/s

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(Shri. A. A. Mulla)

Head of Department

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Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **"ONLINE RTO SYSTEM"** being submitted here with for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faculty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **KUMBHAR PRATHAMESH VAIBHAV and JADHAV VAISHNAVI VIJAY.**

To the best of knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad
Date : 10-5-2023

Mrs. S.G.PADYAL
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Assistant Professor,
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Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE BAGS SHOPPING** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **SHEWALE ROSHANI SIDDHESHWAR and KUMBHAR PRIYANKA RAMESH** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/23

Place : Karad

Date : 10/05/2023

Miss S. R. Pawar

(Project Guide)

Assistant Professor

Department Of Computer Science

Yashwantaro Chavan College Of Science, Karad

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

External Examiner/s

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Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **PET CLINIC MANAGEMENT SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **BAVADEKAR BHUSHAN KAKASO and PISAL ADITYA VILAS** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 10-5-2023

Jirange 10.05.23

Miss. A.G.Jirange

(Project Guide)

AssistantProfessor,

Department of Computer Science,

Yashwantrao Chavan College of Science,Karad.

Evaluated Jirange 17.05.23

External Examiner/s

Yashwantrao Chavan College of Science COMPUTER SCIENCE Karad

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **IPL MANAGEMENT SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **PHADATARE KUNAL SHAILESH and ADSULE ROHIT PANDURANG** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10.05.23

Place : Karad

Date : 10/5/23

Miss.Jirange A.G

(Project Guide)

Assistant Professor,

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External Examiner

(Shri.A.A.Mulla)

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **AUTO PARTS & HARDWARE INVENTORY MANAGEMENT SYSTEM** being submitted here with for the award of **BATCHLOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **SUPANEKAR SUMIT BHAGAWAN** and **TEVAR AJIT PANDURANG** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/23

Place: Karad
Date: 10/05/2023

Mrs. V. A. Mali
(Project Guide)
Assistant Professor,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Evaluated

External Examiner's

(Shri. A. A. Mulla)
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DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **COMPUTER INSTITUTE MANAGEMENT SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **PAWAR SWAPNIL DADASAHEB and MOHOLKAR VIKRANT ANIL** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place : Karad

Date : 10-5-2023

Miss A. G. Jirange

(Project Guide)

Assistant Professor

Department Of Computer Science

Yashwantaro Chavan College Of Science, Karad

External Examiner/s

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

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Head of Department

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Yashwantaro Chavan College Of Science, Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE EXAMINATION SYSTEM QUIZ** being submitted herewith for the award of **BATCHLOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **KADAM SAYALI GANESH** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 10/05/2023

Miss. Jirange.A.G

(Project Guide)

Assistant Professor,

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External Examiner/s

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

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Head

Department of Computer Science

Yashwantrao Chavan College of Science, Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE E-VOTING** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **BAMANE AKASH BALKRUSHNA and PISAL VISHAL BHAUSO** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/23

Place : Karad

Date : 10-5-2023

Miss S. R. Pawar

(Project Guide)

Assistant Professor

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Yashwantrao Chavan College Of Science, Karad

10/5/23

External Examiner/s

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

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Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **FOOTEWAR SHOPPING SYSTRM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in**COMPUTERSCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** Of Shivaji University, Kolhapur is the result of the original research work completed by **JADHAV SAMEER HARIDAS & CHAVAN PRAJWAL UMESH** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

19/05/23

Mrs.S. G. Padayal
(Project Guide)
Assistant Professor,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Place:- Karad
Date:- 19.5.23

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

External Examiner/s

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Head Of Department
Department of Computer Science,
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Head
Department of Computer Science
Yashwantrao Chavan College of Science
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE JEWELLERY SHOPPING** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **SHIKALGAR TOHID IBRAHIM** and **JADHAV AKASH HINDURAO** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/23

Place: Karad

Date: 10-05-23

Miss. S. R. Pawar

(Project Guide)

Assistant Professor,

Department of Computer Science,

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External Examiner/s

Yashwantrao Chavan College of Science * Karad * COMPUTER SCIENCE

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Head,

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Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **HOME BOOKING SYSTEM** being submitted herewith for the award of **BACHLOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **MR. SHINDE OMKAR SAGAR and MR.SHEWALE RUTIK BAJIRAO** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project reporthas not formed earlier the basis for the award of any degree or similar title of this orany other University or examining body.

Place: Karad

Date: 10/5/2023

Mrs. Nalawade A.V.

(Project Guide)

Assistant Professor,

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

Yashwantrao Chavan College of Science ★ COMPUTER SCIENCE ★ Karad

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **GRAIN STORE MANAGEMENT SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTERSCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **SALUNKHE AMIT PANDHARINATH and RODE SANKET CHANDRAKANT** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any otherUniversity or examining body.

Place: Karad
Date: 11/05/2023

Miss. S. G. Padyal
(M.C.A.,SET)

(Project Guide)

Assistant Professor, Department of Computer Science, Yashwantrao Chavan College of Science, Karad.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

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Department of Computer Science
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Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **LIBRARY MANAGEMENT SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **PATIL OMKAR JAGANNATH and JADHAV VISHWAJEET NANASO** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

11.05.23

Place: Karad
Date: 11/05/2023

Miss.JIRANGE.A.G
(Project Guide)
Assistant Professor,
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22/5/2023

Yashwantrao Chavan College of Science Karad COMPUTER SCIENCE

External Examiner/s

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Head Of Department
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Head
Department of Computer Science
Yashwantrao Chavan College of Science
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE SPORTS MATERIAL BOOKING** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **CHAVAN OMKAR VINAYAK and SHINDE TEJAS SHIVAJI** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/23

Mrs. V.A.MALI

(Project Guide)

Assistant Professor,

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

Place: Karad

Date: 10/05/2023

20/5/2023

External Examiner/s

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Yashwantrao Chavan College of Science,
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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **WEIGHING SCALE SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **YADAV ANIKET ANIL and YADAV PRATIK BAPURAO** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad
Date: 10-5-2023

Miss. S. G. Padyal
(Project Guide)
Assistant Professor,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad

External Examiner/s

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

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Head
Department of Computer Science
Yashwantrao Chavan College of Science,
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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **LOCAL LOAN SERVICE** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **RAJUKUMAR SHRIPULISRAY and ADITYA PRAKASH JADHAV** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/5/2023

Place: Karad

Date: 10-5-2023

Mrs. A. V. Nalawade

(Project Guide)

Assistant Professor,

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

External Examiner/s

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **INTERIOR DESIGN** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University. Kolhapur is the result of the original research work completed by **NANGARE UTKARSH SANJAY & JADHAV GANESH SANTOSH** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/2023

Miss. A. V.Nalawade
(Project Guide)
Assistant Professor,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Place: Karad
Date: 10/05/2023

10/5/2023

External Examiner/s

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **CAR SHOWROOM MANAGEMENT SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **PATIL HRISHIKESH ASHOK AND JADHAV SAGAR LAXMAN** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/2023

Mrs. A. V.Nalawade
(Project Guide)
Assistant Professor,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Place:- Karad
Date:- 10/05/2023

Yashwantrao Chavan College of Science ★ COMPUTER SCIENCE ★ Karad

External Examiner/s

Prof.A.A.Mulla
Head Of Department
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **FERTILIZER STORE MANAGEMENT SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE (ENTIRE)** under the Faulty of **SCIENCE AND TECHNOLOGY** of **Shivaji University, Kolhapur** is the result of the original research work completed by **THORAT SARVDNYA DILIP and MULLA KAJAL SALIM** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 10/5/2023

Miss.Jirange A.G. MCA
(Project Guide)
Assistant Professor,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Yashwantrao Chavan College of Science COMPUTER SCIENCE

External Examiner/s

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Yashwantrao Chavan College of Science
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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE BUS SMART CARD SERVICE** being submitted here with for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **WADATE TEJAS VINOD and VARKAD AADESH ANIL** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 10/05/2023

Miss. S. G. Padyal

(Project Guide)

Assistant Professor,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

External Examiner/s

(Shri. A. A. Mulla)

Head of Department,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE VACCINE REGISTRATION** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **SANKPAL RAHUL VIJAY & PHALLE SOMNATH MAHESH** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/2023

Place: Karad

Date: 10/05/2023

Mrs. A. V.Nalawade

(Project Guide)

Assistant Professor,

Department of Computer Science,
Yashwantrao Chavan College of Science,
Karad.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

External Examiner/s

(Shri. A. A. Mulla)

Head,

Department of Computer Science,

Yashwantrao Chavan College of Science,

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE ELECTRICITY BILLING SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **DANGE ANUJA SUNIL and DUBAL GAYATRI SANTAJI** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/2023

Place: Karad

Date: 10/5/2023

Mrs. A. V. Nalawade

(Project Guide)

Assistant Professor,

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

External Examiner/

(Shri. A. A. Mulla)

Head,

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **PET SHOP MANAGEMENT SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **NADAF SAHIL AINU and NADAF NIHAL RAFIK** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place:-Karad

Date:- 10-5-2023

Mrs. Mali.V.A

(Project Guide)

Assistant Professor,

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad

External Examiner/s
(Project Guide)

Yashwantrao Chavan College of Science Karad COMPUTER SCIENCE

(Shri.Mulk.A.A)
(Head of Department)
Yashwantrao Chavan College of Science, Karad

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **CAR SHOWROOM MANAGEMENT SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **PATIL HRISHIKESH ASHOK AND JADHAV SAGAR LAXMAN** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/2023

Mrs. A. V.Nalawade
(Project Guide)
Assistant Professor,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Place:- Karad
Date:- 10/05/2023

10/05/2023

External Examiner/s

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

Prof.A.A.Mulla
Head Of Department
Department of Computer Science,
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Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled AAYURVEDICS AND WELLNESS SOLUTIONS being submitted herewith for the award of BACHELOR OF SCIENCE in **COMPUTER SCIENCE** under the Faculty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **MANE PRAJAKTA DHANAJI and SHIKALGAR KARISHMA LALA** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degrees or similar title of this or any other University or examining body.

Place: Karad

Date: 30/5/2023

Prof.S.G.Padyal (M.C.A,SET)
(Project Guide)
Assistant Professor,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

External Examiner/s

(Shri . A. A. Mulla)
Head Of Department
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE CAR BOOKING** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **BHUJBAL PRANAY YASHWANT and JADHAV SANKET RAMCHANDRA** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Pawar 10/05/23

Place: Karad

Date: 10-5-2023

Miss. S. R. Pawar
(Project Guide)
Assistant Professor,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Yashwantrao Chavan College of Science * Karad * COMPUTER SCIENCE

External Examiner/s

(Shri. A. A. Mulla)
Head of Department,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE OPTICALS SHOPPING** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **PATIL SNEHAL RAHUL and SUTAR PRAGATI MADHUKAR** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/23

Place: Karad

Date: 10/5/2023

Miss. S. R. Pawar

(Project Guide)

Assistant Professor,

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

External Examiner/s

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Head Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE CAR SERVICE BOOKING** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **PAWAR KUNAL MANSING and SANKPAL PRATIK DILIP** my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Yashwantrao Chavan College of Science * Karad * COMPUTER SCIENCE

10/05/23

Place: Karad

Date: 10/05/2023

Mrs.V. A . MALI

(Project Guide)

Assistant Professor,

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

28/5/2023

External Examiner/s

(Shri. A. A. Mulla)

Head of department

Yashwantrao Chavan College of Science, Karad

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE GAS BOOKING** being submitted herewith for the award of **BACHELOR** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **YADAV SAIRAJ PRASHANT and SURYAVANSHI JAYESH SURESH** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/23

Place : Karad

Date : 10/05/2023

Miss. Pawar S.R.

(Project Guide)

Assistant Professor

Department Of Computer Science

Yashwantaro Chavan College Of Science, Karad

15/05/2023

External Examiner/s

(Shri. A. A. Mulla)

(Head Of Department)

Department Of Computer Science

Yashwantaro Chavan College Of Science, Karad

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE ANIMAL FEED BOOKING** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **SALUNKHE AJAY SAMBHAJI and SALUNKHE SUSHANT SUNIL** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 10/05/2023

External Examiner/s

Mrs. Jirange A.G.

(Project Guide)
Assistant Professor,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

(Shri. A. A. Mulla)
Head Of Department,
Department of Computer Science,
Yashwantrao Chavan College of Science, Karad.

Head
Department of Computer Science
Yashwantrao Chavan College of Science
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE PHARMACY ORDERING**being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE**under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **POL SHREYA RAJENDRA and LIMBARE PRAJAKTA PRAKASH**under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

10/05/23

Place: Karad

Date: 10/5/2023

Miss. S. R. Pawar

(Project Guide)

Assistant Professor,

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

External Examiner/s

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

(Shri. A. A. Mulla)

Head Department of Computer Science,

Yashwantrao Chavan College of Science,karad.

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **GYM MANAGEMENT SYSTEM** being submitted herewith for the award of **BACHELOR OF SCIENCE** in **COMPUTER SCIENCE** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **PATIL PARTH PRAMOD and KADAM SOHAM UDAY** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 10-05-2023

10/05/23

Mrs. V. A. MALI

(Project Guide)

Assistant Professor,

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

External Examiner/s

Yashwantrao Chavan College of Science * Karad * COMPUTER SCIENCE

(Shri. A. A. Mulla)

(Head Of Department)

Department of Computer Science,

Yashwantrao Chavan College of Science, Karad.

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **CLOTH BAZAR MANAGEMENT SYSTEM** being submitted here with for the award of **MASTER OF SCIENCE** in **COMPUTER SCIENCE SEM-II (2022 - 2023)** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **DESAI ABHISHEK RAMESH** and **JADHAV UDAY SHANKAR** under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

Place: Karad

Date: 23.06.23

Prof. A. G. Jirange

(Project Guide)

External Examiner/s

(Shri . A. A. Mulla)

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **BAKERY MANAGEMENT SYSTEM** being submitted herewith for the award of **MASTER OF SCIENCE** in **COMPUTER SCIENCE SEM II, 2022-23** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **MISS. KADAM ANKITA VILAS** and **MISS. DANAWALE MANASI SUNIL** Under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 23/06/2023

Miss. A. G. Jirange

Project Guide

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

External Examiner/s

Shri. A. A. Mulla

Head Of Department

Head
Department of Computer Science
Yashwantrao Chavan College of Science
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **BAKERY MANAGEMENT SYSTEM** being submitted herewith for the award of **MASTER OF SCIENCE** in **COMPUTER SCIENCE SEM II, 2022-23** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **MISS. KADAM ANKITA VILAS** and **MISS. DANAWALE MANASI SUNIL** Under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 23/06/2023

Miss. A. G. Jirange

Project Guide

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

External Examiner/s

Shri. A. A. Mulla

Head Of Department

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **BAKERY MANAGEMENT SYSTEM** being submitted herewith for the award of **MASTER OF SCIENCE** in **COMPUTER SCIENCE SEM II, 2022-23** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **MISS. KADAM ANKITA VILAS** and **MISS. DANAWALE MANASI SUNIL** Under my supervision and guidance and to the best of my knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 23/06/2023

Miss. A. G. Jirange

Project Guide

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

External Examiner/s

Shri. A. A. Mulla

Head Of Department

Head
Department of Computer Science
Yashwantrao Chavan College of Science
Karad

YASHWANTRAO CHAVAN COLLEGEOF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE PHARMACY ORDERING** being submitted herewith for the award of **MASTER OF SCIENCE** in **COMPUTER SCIENCE SEM-II (2022-23)** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **MISS.SURYAGANDH POONAM ARUN** and **MISS. GURAV MADHAVI AJAY** under my supervision and guidance and to the best ofmy knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 23/06/2023

MISS. A. G. JIRANGE

Project Guide

Yashwantrao Chavan College of Science * Karad * COMPUTER SCIENCE

External Examiner/s

Shri. A. A. Mulla

Head of Department

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGEOF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE PHARMACY ORDERING** being submitted herewith for the award of **MASTER OF SCIENCE** in **COMPUTER SCIENCE SEM-II (2022-23)** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **MISS.SURYAGANDH POONAM ARUN** and **MISS. GURAV MADHAVI AJAY** under my supervision and guidance and to the best ofmy knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 23/06/2023

MISS. A. G. JIRANGE

Project Guide

Yashwantrao Chavan College of Science * Karad * COMPUTER SCIENCE

External Examiner/s

Shri. A. A. Mulla

Head of Department

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

YASHWANTRAO CHAVAN COLLEGEOF SCIENCE, KARAD

DEPARTMENT OF COMPUTER SCIENCE

CERTIFICATE

This is to certify that the project report entitled **ONLINE PHARMACY ORDERING** being submitted herewith for the award of **MASTER OF SCIENCE** in **COMPUTER SCIENCE SEM-II (2022-23)** under the Faulty of **SCIENCE AND TECHNOLOGY** of Shivaji University, Kolhapur is the result of the original research work completed by **MISS.SURYAGANDH POONAM ARUN** and **MISS. GURAV MADHAVI AJAY** under my supervision and guidance and to the best ofmy knowledge and belief, the work embodied in this project report has not formed earlier the basis for the award of any degree or similar title of this or any other University or examining body.

Place: Karad

Date: 23/06/2023

MISS. A. G. JIRANGE

Project Guide

Yashwantrao Chavan College of Science ★ Karad ★ COMPUTER SCIENCE

External Examiner/s

Shri. A. A. Mulla

Head of Department

Head
Department of Computer Science
Yashwantrao Chavan College of Science,
Karad

Yashwantrao Chavan College of Science, Karad

Department Of Electronics

CERTIFICATE

This is to certify that, the project work entitled "*Humidity and Temperature sensor*" which is submitted by,

Mr. ADITYA KRISHNAT GURAV

Mr. SAIRAJ DNYANESHWAR TODKAR

Mr. ZAREKAR SANKET SUBHASH

in the partial fulfillment of the requirement for the award of the degree of ***"Bachelor of Science in Electronics"*** of ***Shivaji University, Kolhapur*** is the record of their own work carried out under my guidance year 2022-23.

Place – Karad

Date – 22/5/2023.

Smt. Sarwade .M.P.
(Project Guide)

Examiner

Head of Department

Yashwantrao Chavan College of Science ★ Karad ★ ELECTRONICS

YashwantraoChavan College of Science, Karad

Department Of Electronics

CERTIFICATE

This is to certify that, the project work entitled **"AUTOMATIC RAIN SENSOR WIPER"** which is submitted by,

Mr. Salunkhe Pratik Niranjan (Roll No:-3310)

Mr. Desai Shriyash Sambhaji (Roll No:-3311)

Mr. Kharade Baljit (Roll No:-3029)

in the partial fulfillment of the requirement for the award of the degree of *"Bachelor of Science in Electronics"* of ***Shivaji University, Kolhapur*** is the record of their own work carried out under my guidance year 2022-2023.

Place – Karad

Date – 22/05/2023

Smt. Dhumal A.S

(Project Guide)

Head of Department

Examiner

Yashwantrao Chavan College of Science ★ Karad ★ ELECTRONICS

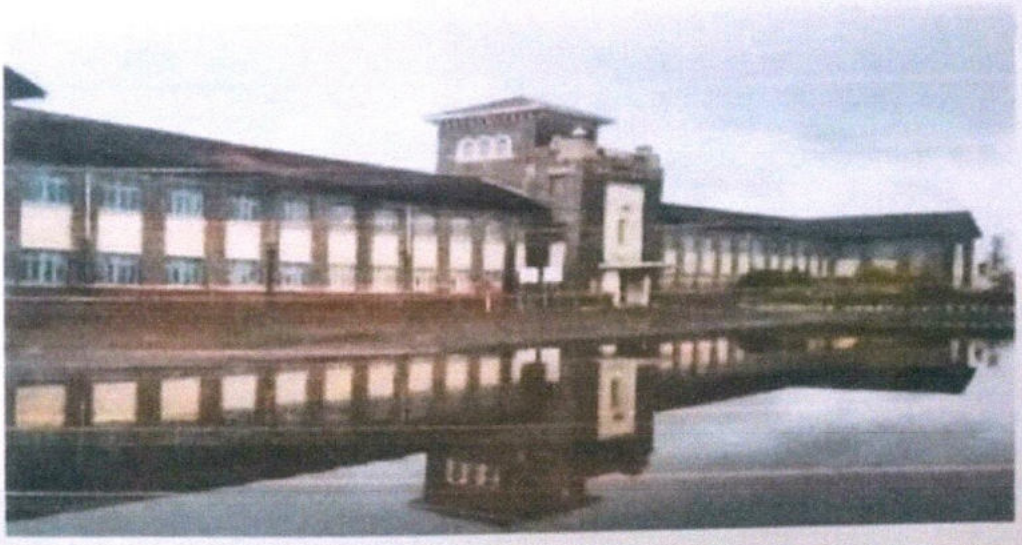
A Project Report

On

" STUDY OF ZOOPLANKTONS AND PHYTOPLANKTONS OF KRISHNA RIVER NEAR PRITISANGAM"

Submitted to

SHIVAJI UNIVERSITY, KOLHAPUR.



Yashwantrao Chavan College Of Science, Vidyanagar, Karad.

Deparment of Zoology

B.Sc. III

Year 2023-2023

SR NO	NAME OF STUDENTS	ROLL NO	EXAM SEAT NO
1	Niyanta Arun Kore	3331	38529
2	Saniya Ramjan Shikalgar	3333	38531
3	Piyusha Manohar Kolekar	3332	38528

Under the Guidence

Mrs. T. V. Madane

MSc.BEd

SHREE SHIVAJI UNIVERSITY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF ZOOLOGY

CERTIFICATE

This is to certify that Miss.Niyanka Arun Kore has completed theproject on "STUDY OF ZOOPLANKTONS AND PHYTOPLANKTONS OF KRISHNA RIVER NEAR PRITISANGAM" for fulfillment of practical work prescribed in Shivaji university Kolhapur zoology under guidance during the year 2022-23

12/5/23

PROJECT GUIDENCE

EXAMINER

HEAD OF DEPARMENT

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Yashwantrao Chavan College of Science * Karad *
ZOOLOGY

A Project Report

On

"STUDY OF ZOOPLANKTONS AND PHYTOPLANKTONS OF KRISHNA RIVER NEAR PRITISANGAM"

Submitted to

SHIVAJI UNIVERSITY, KOLHAPUR.



Yashwantrao Chavan College Of Science, Vidyanagar, Karad.

Deparment of Zoology

B.Sc. III

Year 2022-2023

SR NO	NAME OF STUDENTS	ROLL NO	EXAM SEAT NO
1	Piyusha Manohar Kolekar	3332	38528
2	Saniya Ramjan Shikalgar	3333	38531
3	Niyanta Arun Kore	3331	38529

Under the Guidence

Mrs. T. V. Madane

MSc.BEd

SHREE SHIVAJI UNIVERSITY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF ZOOLOGY

CERTIFICATE

This is to certify that Miss.Piyusha Manohar Kolekar has completed the project on "STUDY OF ZOOPLANKTONS AND PHYTOPLANKTONS OF KRISHNA RIVER NEAR PRITISANGAM" for fulfillment of practical work prescribed in Shivaji university Kolhapur zoology under guidance during the year 2022-23

PROJECT GUIDENCE

EXAMINER

HEAD OF DEPARMENT

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Yashwantrao Chavan College of Science * Karad * ZOOLOGY

A Project Report

On

"STUDY OF ZOOPLANKTONS AND PHYTOPLANKTONS OF KRISHNA RIVER NEAR PRITISANGAM"

Submitted to

SHIVAJI UNIVERSITY, KOLHAPUR.



Yashwantrao Chavan College Of Science, Vidyanagar, Karad.

Deparment of Zoology

B.Sc. III

Year 2022-2023

SR NO	NAME OF STUDENTS	ROLL NO	EXAM SEAT NO
1	Saniya Ramjan Shikalgar	3333	38531
2	Piyusha Manohar Kolekar	3332	38528
3	Niyanta Arun Kore	3331	38529

Under the Guidence

Mrs. T. V. Madane

MSc.BEd

SHREE SHIVAJI UNIVERSITY

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF ZOOLOGY

CERTIFICATE

This is to certify that Miss. Saniya Ramjan Shikalgar has completed the project on "STUDY OF ZOOPLANKTONS AND PHYTOPLANKTONS OF KRISHNA RIVER NEAR PRITISANGAM" for fulfillment of practical work prescribed in Shivaji university Kolhapur zoology under guidance during the year 2022-23

12/5/23.

PROJECT GUIDENCE

EXAMINER

HEAD OF DEPARMENT

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Yashwantrao Chavan College of Science * Karad * ZOOLOGY

A project report

on

"INSECT BIODIVERSITY IN COLLEGE CAMPUS"

Submitted to

SHIVAJI UNIVERSITY KOLHAPUR



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF ZOOLOGY

B. Sc. - III

YEAR 2022 – 2023

Sr. No	Name of Student	Roll No	Exam Seat No
1.	Miss. Ambawade Priya Ananda	3336	38525
2.	Miss Mali Sonali Ramchandra	3337	38530
3.	Mrs. Gurav Rupali Rajendra	3341	38527

Under the Guidance of

Mrs. Mulla. K. C.

(M.Sc. B.ED)

Shivaji University, Kolhapur

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

DEPARTMENT OF ZOOLOGY

CERTIFICATE

This is to certify that, **Miss. Ambawade Priya Ananda** of B. Sc. Part III has satisfactorily completed the "project on Insect biodiversity in my surrounding" for fulfillment of B.Sc. IIIrd practical work prescribed in Shivaji University Zoology Syllabus.

13/5/23

Department of Zoology

Head

Department of Zoology

External Examiner

Yashwantrao Chavan College of Science ZOOLOGY Karad

A project report

on

"INSECT BIODIVERSITY IN COLLEGE CAMPUS"

Submitted to

SHIVAJI UNIVERSITY KOLHAPUR



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF ZOOLOGY

B. Sc. - III

YEAR 2022 – 2023

Sr. No	Name of Student	Roll No	Exam Seat No
1.	Miss Mali Sonali Ramchandra	3337	38530
2.	Miss. Ambawade Priya Ananda	3336	38525
3.	Mrs. Gurav Rupali Rajendra	3341	38527

Under the Guidance of

Mrs. Mulla. K. C.

(M.Sc. B.ED)

Shivaji University, Kolhapur

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

DEPARTMENT OF ZOOLOGY

CERTIFICATE

This is to certify that, **Miss Mali Sonali Ramchandra** of B. Sc. Part III has satisfactorily completed the "project on Insect biodiversity in my surrounding" for fulfillment of B.Sc. IIIrd practical work prescribed in Shivaji University Zoology Syllabus.

13/5/23

Department of Zoology

Head

Department of Zoology

External Examiner

A

PROJECT REPORT ON

Diversity of Fresh Water Fishes from Karad Tahsil ol

Satara District, Maharashtra, India

Submitted to

SHIVAILUNIVERSITY OF KOLHAPUR.



Yashwantrao Chavan College of Science Vidyanagar,

Karad.

Department of Zoology

B.Sc. III

Year 2022-23

Sr.No	Name Of Student	Roll No.	Exam No.
1.	Mr. Aniket Maruti Yadav	3338	
2.	Mr. Suraj anandrao Shinde	3339	38522
3.	Miss . Megha Ramchndra Chavan	3340	

Under Guidance of

Mrs. Madane . T .

Shree Shivaji Education, Karad

Yashawantrao Chavan College Of Science,

Karad

Department Of Zoology

This is to certify that **Mr. Aniket Maruti Yadav** his completed the project on **"Diversity Of Fresh Water Fishes from to Karad Tahsil of Satara District, Maharashtra State India"** for fulfillment of practical work prescribed in Shivaji University Kolhapur Zoology under guidance. during the Year 2022-23

Project Guide

Examinar

Head

Dept..Of Zoology

Yashwantrao Chavan College of Science Karad.

Yashwantrao Chavan College of Sci ZOOLOGY Karad

Shree Shivaji Education, Karad

Yashawantrao Chavan College Of Science,

Karad

Department Of Zoology

This is to certify that Mr.**Suraj Anandrao Shinde** his completed the project on **"Diversity Of Fresh Water Fishes from to Karad Tahsil of Satara District, Maharashtra State India"** for fulfillment of practical work prescribed in Shivaji University Kolhapur Zoology under guidance. during the Year 2022-23

Project Guide

Examinar

Head

Dept..Of Zoology

Yashwantrao Chavan College of Science Karad.

Yashwantrao Chavan College of Science ★ Karad ★ ZOOLOGY

A project report

on

"INSECT BIODIVERSITY IN COLLEGE CAMPUS"

Submitted to

SHIVAJI UNIVERSITY KOLHAPUR



YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

DEPARTMENT OF ZOOLOGY

B. Sc. - III

YEAR 2022 – 2023

Sr. No	Name of Student	Roll No	Exam Seat No
1.	Mrs. Gurav Rupali Rajendra	3341	38527
2.	Miss. Ambawade Priya Ananda	3336	38525
3.	Miss Mali Sonali Ramchandra	3337	38530

Under the Guidance of

Mrs. Mulla. K. C.

(M.Sc. B.ED)

Shivaji University, Kolhapur

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD

DEPARTMENT OF ZOOLOGY

CERTIFICATE

This is to certify that, **Mrs. Gurav Rupali Rajendra** of B. Sc. Part III has satisfactorily completed the "project on Insect biodiversity in my surrounding" for fulfillment of B.Sc. IIIrd practical work prescribed in Shivaji University Zoology Syllabus.

13/5/23

Department of Zoology

Head 18/5/23

Department of Zoology

External Examiner

Yashwantrao Chavan College of Science ★ Karad ★ ZOOLOGY

A

PROJECT REPORT ON

Diversity of Fresh Water Fishes from Karad Tahsil ol Satara District, Maharashtra, India

Submitted to

SHIVAJI UNIVERSITY OF KOLHAPUR.



Yashwantrao Chavan College of Science Vidyanagar,

Karad.

Department of Zoology

B.Sc. III

Year 2022-23

Sr.No	Name Of Student	Roll No.	Exam No.
1.	Miss . Megha Ramchndra Chavan	3340	৪৪১২৬
2.	Mr. Suraj anandrao Shinde	3339	
3.	Mr.Aniket Maruti Yadav	3338	

Under Guidance of

Mrs. Madane . T . Y

Shree Shivaji Education, Karad

Yashawantrao Chavan College Of Science,

Karad

Department Of Zoology

This is to certify that **Miss . Megha Ramchndra Chavan** his completed the project on **"Diversity Of Fresh Water Fishes from to Karad Tahsil of Satara District, Maharashtra State India"** for fulfillment of practical work prescribed in Shivaji University Kolhapur Zoology under guidance. during the Year 2022-23

Project Guide

Examinar

Head

Dept..Of Zoology

Yashwantrao Chavan College of Science Karad.

Yashwantrao College of Science, Karad

Department of Statistics

Project Work

(2022-23)

CERTIFICATE

This is to certify that, Mr. Shete Shivtej

Roll No.: - —

Exam Seat No.: -

Has actively participated in the project work held in month of August 2022-23 and successively completed under the guidance of Miss. P. J. Thombare.

Signature of Guide

Head,
Department of Statistics

Yashwantrao Chavan College of Science ★ Karad ★ STATISTICS

SHIVAJI SHIKSHAN SANSTHA'S
YASHAWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD



UNDER SHIVAJI UNIVERSITY , KOLHAPUR

B.Sc. - III

A PROJECT REPORT ON

" CORROSION OF IRON "

[USING VARIOUS CONCENTRASIONS OF SULFURIC ACID (H_2SO_4)]

SUBMITTED BY

SR.NO	STUDENT NAME	ROLL NO	EXAM SEAT NO
1	PATIL SHRUTI RAJARAM	3098	
2	PATIL DHANASHRI SUBHASH	3091	
3	PALASE POOJA SHANKAR	3086	
4	NIGADE SANDHYA RAJU	3084	
5	NIKAM SANJANA MOHAN	3085	
6	NALAWADE PRATIKSHA RAJENDRA	3081	
7	PATIL AKSHATA MARUTI	3088	

UNDER THE GUIDANCE OF

Dr.B.E.MAHADIK

DEPARTMENT OF CHEMISTRY

YASHAWANTRAO CHAVAN COLLEGE OF SCIENCE KARAD

(2022-2023)

YASHAWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Chemistry

CERTIFICATE

This to certify that,

Sr.no	Name of the student	Roll No
1	PATIL SHRUTI RAJARAM	3098
2	PATIL DHANASHRI SUBHASH	3091
3	PALASE POOJA SHANKAR	3086
4	NIGADE SANDHYA RAJU	3084
5	NIKAM SANJANA MOHAN	3085
6	NALAWADE PRATIKSHA RAJENDRA	3081
7	PATIL AKSHATA MARUTI	3088

Have submitted the project entitled "CORROSION OF IRON" for the year 2022-23. This project is carried out under my guidance and supervision. With the best my knowledge this is original work and submitted for the degree of B.SC. III Chemistry of Shivaji University Kolhapur. This work present bonafied work of student.

Dr.B.E. Mahadik

Department of chemistry

Place: Karad

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

External Examiners

Head Department of Chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Date : 13-2-23

DECLARATION

We have undersigned here by declare that project entitled "Corrosion of Iron using various concentrations of sulfuric acid (H_2SO_4)" written and submitted by us. We further declare that empirical result in this project is based on the data collected by us. We have understood it is liable to be punished as the authorized deem fill.

Date:

Place: Karad

Sr.no	Name of students	Roll no.	Exam seat no	Sign
1	Patil Shruti Rajaram	3098		
2	Patil Dhanashri Subhash	3091		
3	Palase Pooja Shankar	3086		
4	Nigade Sandhya Raju	3084		
5	Nikam Sanjana Mohan	3085		
6	Nalawade Pratiksha Rajendra	3081		
7	Patil Akshata Maruti	3088		

A Project ReportOn

"Production Of Bioplastics From Banana Peels"

Submitted To Department of

Chemistry

Yashwantrao Chavan College Of Science,Karad



Submitted by,

Sr.No.	Name of the Student	Roll.No.
1	Phalle Soham Vinayak	3116
2	Raut Shranik Chandrakant	3119
3	Pawar Saurabh Sambhaji	3111
4	Patil Utkarsh Vikas	3101
5	Phadtare Amar Machindra	3115
6	Patil Vishawaraj Sajivant	3104

Under the Guidence Of

Mr.G.B.Dhake

Department of Chemistry

Yashwantrao Chavan College of Science,Karad

(Year 2022-23)

YASHWANTRAO CHAVAN COLLEGE OFSCIENCE,KARAD

Deparment Of Chemistry

CERTIFICATE

This is to certify that

Sr.No.	Name of the Student	Roll.No.
1	Phalle Soham Vinayak	3116
2	Raut Shranik Chandrakant	3119
3	Pawar Saurabh Sambhaji	3111
4	Patil Utkarsh Vikas	3101
5	Phadtare Amar Machindra	3115
6	Patil Vishwaraj Sajivant	3104

We have submitted the project entitled **"Production Of Bioplastics From Banana Peels"** for the year 2022-23. This project is carried out under my guidance and supervision. With the best my Knowledge this original work and submitted for the degree of B.Sc.III Chemistry of Shivaji University Kolhapur. This works present bonafied work of student.

Mr.G.B.Dhake

Department of chemistry

Place: Karad

External Examiner's

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Head Department of chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Date :

YASHWANTRAO CHAVAN COLLEGE OFSCIENCE, KARAD

Department of Chemistry

DECLARATION

This is to certify that,

Sr.No.	Name of the Student	Roll.No.
1	Phalle Soham Vinayak	3116
2	Raut Shranik Chandrakant	3119
3	Pawar Saurabh Sambhaji	3111
4	Patil Utkarsh Vikas	3101
5	Phadtare Amar Machindra	3115
6	Patil Vishwaraj Sajivant	3104

We have submitted the project entitled **"Production Of Bioplastics From Banana Peels"** for the year 2022-23.The project was carried out under my guidance and supervision.

Mr.G.B.Dhake

Project Guide

Place :

Date :

Project Report

On

"Kjeldahl Method for Determination of Nitrogen"

Submitted To

Department of Chemistry

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



Submitted By,

Sr.No.	Name of the Student	Roll No.
1	Kurkute Atharva Vitthal	3061
2	Lad Prakash Sanjay	3062
3	Lohar Vishal Bhagvat	3063
4	Mahadik Abhijeet Sanjay	3064
5	Mahind Avadhut Shrirang	3065
6	Malave Pranali Vaman	3066
7	Mali Kishori Shankar	3068
8	Mali Pankaj Shivaji	3069
9	Mane Harshada Kalyan	3070
10	Mane Yash Mahendra	3072
11	Mohite Raviraj Dadaso	3076
12	More Jyoti Kishor	3077
13	More Nivas Balaram	3078
14	Mulla Hasina Ramjan	3079
15	Mulla Sana Nurmahanmmad	3080

Under Guidance Of

Mr. R. S. Patil

Department of Chemistry

Yashwantrao Chavan College Of Science, Karad

{Year – 2022-23}

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

Department of Chemistry

CERTIFICATE

This is to certify that,

Sr.No.	Name of the Student	Roll No.
1	Kurkute Atharva Vitthal	3061
2	Lad Prakash Sanjay	3062
3	Lohar Vishal Bhagvat	3063
4	Mahadik Abhijeet Sanjay	3064
5	Mahind Avadhut Shrirang	3065
6	Malave Pranali Vaman	3066
7	Mali Kishori Shankar	3068
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9	Mane Harshada Kalyan	3070
10	Mane Yash Mahendra	3072
11	Mohite Raviraj Dadaso	3076
12	More Jyoti Kishor	3077
13	More Nivas Balaram	3078
14	Mulla Hasina Ramjan	3079
15	Mulla Sana Nurmahanmmad	3080

Have submitted the project entitled **"Kjeldahl Method for Determination of Nitrogen"** for the year 2022-23. This project is carried out under my guidance and supervision. With the best my Knowledge this original work and submitted for the degree of B.Sc.III Chemistry of Shivaji University Kolhapur. This works present bonafied work of student.

Mr. R. S. Patil

Department Of Chemisrty

Place :

Date :

External Examiner

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Head Of Department

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

Department of Chemistry

DECLARATION

This is to certify that,

Sr.No.	Name of the Student	Roll No.
1	Kurkute Atharva Vitthal	3061
2	Lad Prakash Sanjay	3062
3	Lohar Vishal Bhagvat	3063
4	Mahadik Abhijeet Sanjay	3064
5	Mahind Avadhut Shrirang	3065
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8	Mali Pankaj Shivaji	3069
9	Mane Harshada Kalyan	3070
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12	More Jyoti Kishor	3077
13	More Nivas Balaram	3078
14	Mulla Hasina Ramjan	3079
15	Mulla Sana Nurmahanmmad	3080

Have submitted the project entitled **"Kjeldahl Method for Determination of Nitrogen"** for the year 2022-23.The project was carried out under my guidance and supervision.

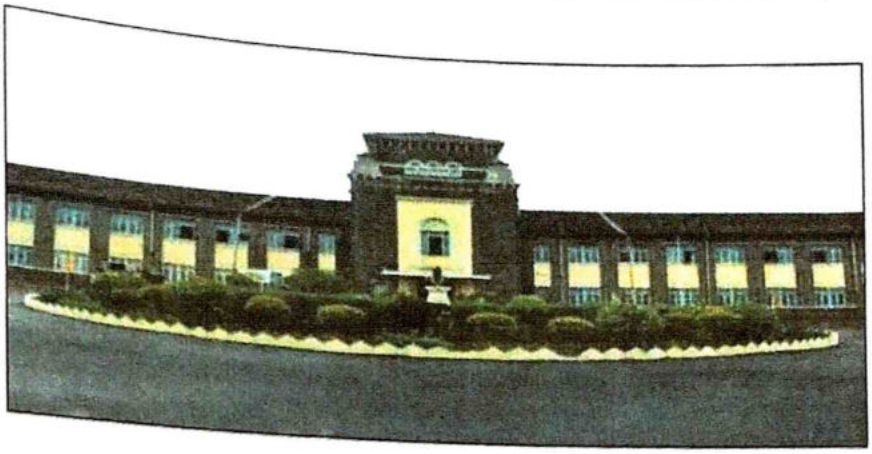
Mr. R. S. Patil

Project Guide

Place :

Date :

SHIVAJI SHIKSHAN SANSTHA'S
YASHAWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD



UNDER SHIVAJI UNIVERSITY , KOLHAPUR

B.Sc. - III

A PROJECT REPORT ON

" ANALYSIS OF DIFFERENT TYPES OF ORES "

SUBMITTED BY

SR.NO	STUDENT NAME	ROLL NO	EXAM SEAT NO
1	Salunkhe Pranita Sanjay	3121	
2	Sapkal Sanika Dhanaji	3124	
3	Sapkal Supriya Sanjay	3125	
4	Shaikh Swaliya Mansur	3133	
5	Shedage Sanyogita Vijaya	3134	
6	Shelar Sneha Subhash	3135	
7	Shinde Gayatri Uday	3137	
8	Shivdas Neha Tanaji	3140	

UNDER THE GUIDANCE OF

Dr.U.P.LAD

DEPARTMENT OF CHEMISTRY

YASHAWANTRAO CHAVAN COLLEGE OF SCIENCE KARAD

(2022-2023)

DECLARATION

We have undersigned here by declare that project entitled "ANALYSIS OF DIFFERENT TYPES OF ORES" written and submitted by us. We further declare that empirical result in this project is based on the data collected by us. We have understood it is liable to be punished as the authorized deem fill.

Date:

Place: Karad

Sr.no	Name of students	Roll no.	Exam seat no	Sign
1	Salunkhe Pranita Sanjay	3121		
2	Sapkal Sanika Dhanaji	3124		
3	Sapkal Supriya Sanjay	3125		
4	Shaikh Swaliya Mansur	3133		
5	Shedage Sanyogita Vijaya	3134		
6	Shelar Sneha Subhash	3135		
7	Shinde Gayatri Uday	3137		
8	Shivdas Neha Tanaji	3140		

Project Guide

Project Report

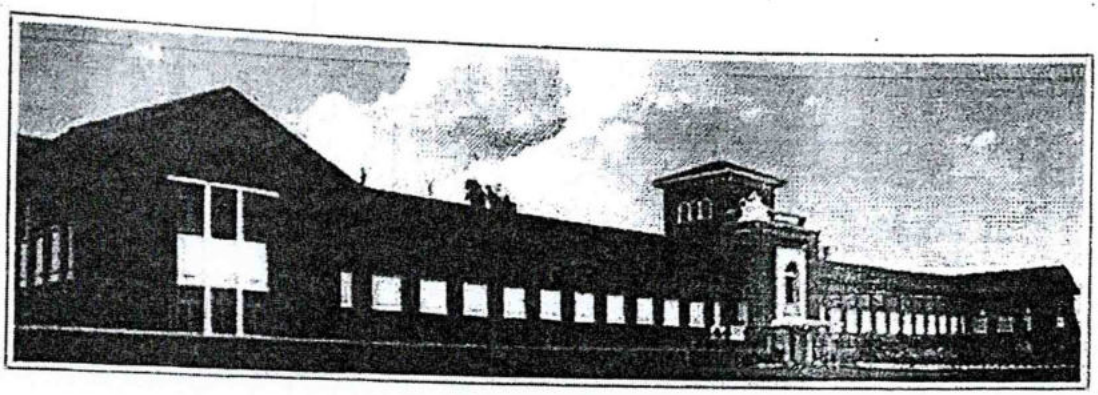
On

"Analysis of Alloy"

Submitted To

Department of Chemistry

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



Submitted By,

Sr.No.	Name of the Student	Roll No.
1		

Under Guidance Of

Dr.U.P. Lad

Department of Chemistry

Yashwantrao Chavan College Of Science, Karad

{Year – 2022-23}

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

Department of Chemistry

CERTIFICATE

This is to certify that,

Sr.No.	Name of the Student	Roll No.
1		

Have submitted the project entitled "Analysis Of Alloy" for the year 2022-23. This project is carried out under my guidance and supervision. With the best my Knowledge this original work and submitted for the degree of B.Sc.III Chemistry of Shivaji University Kolhapur. This works present bonafied work of student.

13/05/23

Dr.U.P.Lad
Department Of Chemisrty

External Examiner

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Head Of Department
Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Place :

Date :

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

Department of Chemistry

DECLARATION

This is to certify that,

Sr.No.	Name of the Student	Roll No.	Sign.
1			

Have submitted the project entitled "Analysis Of Alloy" for the year 2022-23.The project was carried out under my guidance andsupervision.

Dr.U.P.Lad

Project Guide

Place :

Date :

A Project report

On

"ANALYSIS OF DIFFERENT TYPES OF ORES"

Submitted to

Department of Chemistry

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



Submitted by,

Sr.No.	Name of the Student	Roll No.
1	Salunkhe Pranita Sanjay	3121
2	Sapkal Sanika Dhanaji	3124
3	Sapkal Supriya Sanjay	3125
4	Shaikh Swaliya Mansur	3133
5	Shedage Sayogita Vijaya	3134
6	Shelar Sneha Subhash	3135
7	Shinde Gayatri Uday	3137
8	Shivdas Neha Tanaji	3140

Under Guidence of

Dr.U.P.LAD

(Year 2022-23)

YASHVANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

Department of Chemistry

CERTIFICATE

This to certify that,

Sr.No.	Name of the Student	Roll No.
1	Salunkhe Pranita Sanjay	3121
2	Sapkal Sanika Dhanaji	3124
3	Sapkal Supriya Sanjay	3125
4	Shaikh Swaliya Mansur	3133
5	Shedage Sayogita Vijaya	3134
6	Shelar Sneha Subhash	3135
7	Shinde Gayatri Uday	3137
8	Shivdas Neha Tanaji	3140

have submitted the project entitled **"ANALYSIS OF DIFFRENT TYPES OF ORES "** for the year 2022-23. This project is carried out under my guidance and supervision. With the best my Knowledge this original work and submitted for the degree of B.Sc.III Chemistry of Shivaji University Kolhapur. This works present bonafied work of student.

18/04/22

Dr.U.P.LAD

Department of chemistry

External Examiners

Head Department of chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Place : Karad

Date :

YASHVANTRAO CHAVAN COLLEGE OF SCIENCE,KARAD

Department of Chemistry

DECLARATION

This is to certify that,

Sr.No.	Name of the Student	Roll No.	Sign.
1	Salunkhe Pranita Sanjay	3121	
2	Sapkal Sanika Dhanaji	3124	
3	Sapkal Supriya Sanjay	3125	
4	Shaikh Swaliya Mansur	3133	
5	Shedage Sayogita Vijaya	3134	
6	Shelar Sneha Subhash	3135	
7	Shinde Gayatri Uday	3137	
8	Shivdas Neha Tanaji	3140	

have submitted the project entitled **"ANALYSIS OF DIFFRENT TYPES OF ORES"** for the year 2022-23.The project was carried out under my guidance andsupervision.

Place : Karad

Date :

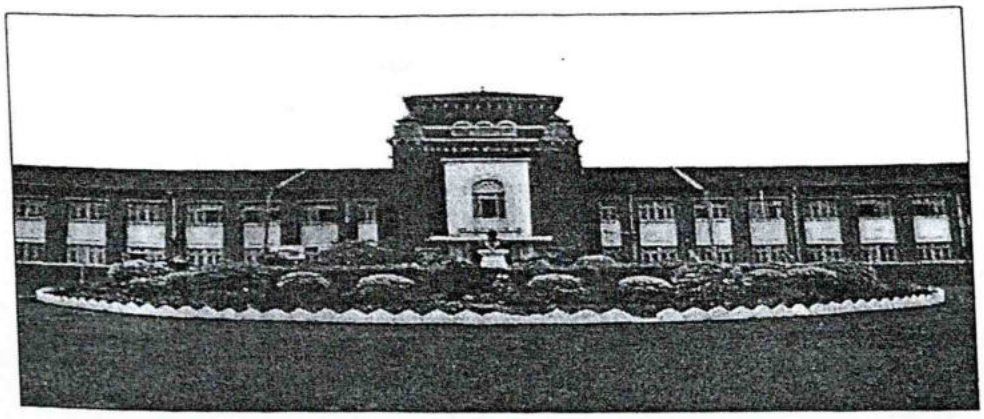
Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

Dr.U.P.Lad
Project Guide

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

SHIVAJI SHIKSHAN SANSTHA'S

YASHAWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD



UNDER SHIVAJI UNIVERSITY , KOLHAPUR

B.Sc. - III

A PROJECT REPORT ON

" CORROSION OF IRON "

[USING VARIOUS CONCENTRASIONS OF SULFURIC ACID (H_2SO_4)]

SUBMITTED BY

SR.NO	STUDENT NAME	ROLL NO	EXAM SEAT NO
1	PATIL SHRUTI RAJARAM	3098	
2	PATIL DHANASHRI SUBHASH	3091	
3	PALASE POOJA SHANKAR	3086	
4	NIGADE SANDHYA RAJU	3084	
5	NIKAM SANJANA MOHAN	3085	
6	NALAWADE PRATIKSHA RAJENDRA	3081	
7	PATIL AKSHATA MARUTI	3088	

UNDER THE GUIDANCE OF

Dr.B.E.MAHADIK

DEPARTMENT OF CHEMISTRY

YASHAWANTRAO CHAVAN COLLEGE OF SCIENCE KARAD

(2022-2023)

DECLARATION

We have undersigned here by declare that project entitled "Corrosion of Iron using various concentrations of sulfuric acid (H_2SO_4)" written and submitted by us. We further declare that empirical result in this project is based on the data collected by us. We have understood it is liable to be punished as the authorized deem fill.

Date:

Place: Karad

Sr.no	Name of students	Roll no.	Exam seat no	Sign
1	Patil Shruti Rajaram	3098		
2	Patil Dhanashri Subhash	3091		
3	Palase Pooja Shankar	3086		
4	Nigade Sandhya Raju	3084		
5	Nikam Sanjana Mohan	3085		
6	Nalawade Pratiksha Rajendra	3081		
7	Patil Akshata Maruti	3088		

ACKNOWLEDGEMENT

We wish to convey our deep sense of gratitude to our project guide **Dr. B.E. Mahadik** Assistant Professor Department of Chemistry for his valuable guidance , Keen interest , excellent suggestion's and support during the course of this work .

We also extend my sincere thanks to **Dr. S. H. Burungale** Professor and Head of the Department of Chemistry for providing the laboratory facilities.

My sincere thanks are due to **Principle Dr.S.B. Kengar** for his constant encouragement.

we are especially thankful to the non-teaching members of this department for providing their valuable help in carrying out this project work.

Finally we would like to thank those who helped directly or indirectly in completion of this project.

Date: 11-5-23

Place: karad

A Project report

On

"ANALYSIS OF CALCIUM IN DIFFERENT PHARMACEUTICAL SAMPALS"

Submitted to

Department of Chemistry

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



Submitted by,

Sr.No.	Name of the Student	Roll No.
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2	Suryavanshi Omkar Nandakumar	3145
3	Sutar Shubham Vikas	3147
4	Sutar Suraj Balaso	3148
5	Talugade Vishal Adhikrao	3149
6	Thorat Sagar Sanjay	3152

Under Guidence of

Dr. S. D. Jadhav

(Year 2022-23)

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD

Department of Chemistry

CERTIFICATE

This is to certify that,

Sr. No.	Name of the Student	Roll No.
1	Suryavanshi Ketan Ganesh	[illegible]
2	Suryavanshi Omkar Ramchandra	[illegible]
3	Sutar Shubham Vikas	[illegible]
4	Sutar Suraj Baban	[illegible]
5	Tahsildar Vishal Ashok	[illegible]
6	Thorat Sagar Sanjay	[illegible]

have submitted the project entitled "**ANALYSIS OF CALCIUM IN DIFFRENT PHARMACEUTICAL SAMPLES**" for the year 2022-23. This project is carried out under my guidance and supervision. With the best my Knowledge this original work and submitted for the degree of B.Sc.III Chemistry of Shivaji University Kolhapur. This works present bonafied work of student.

Dr. S. D. Jadhav

Department of chemistry

External Examiners

Head Department of Chemistry

Yashwantrao Chavan College of Science CHEMISTRY Karad

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Date : [illegible]

Place : Karad

Yashwantrao Chavan College Of Science Karad.

Deparment of chemistry

A

Project Report On

"ANALYSIS OF CALCIUM IN DIFFERENT PHARMECEUTICAL SAMPLES"

SUBMITTED TO

Bachelor Of Science In chemistry

SUBMITTED BY

Sr.no	Name of the student	Roll No
1	Miss. Sakshi Sanjay Sawant	3128
2	Miss. Pooja Maruti shinde	3138

UNDER THE GUIDENCE OF

Mr.G.B.Dhake



Yashwantro Chavan college Of Science, Karad

(2022-2023)

Yashwantrao Chavan College of Science, Karad

Deparment Of Chemistry

CERTIFICATE

This is to certify that,

Sr.no	Name of the student	Roll.no
1	Miss. Sakshi Sanjay Shinde	3128
2	Miss. Pooja Maruti Shinde	3138

Have successfully completed the project "Analysis Of calcium in Different pharmaceutical sample " for the partial fulfillment for the award of the degree of bachelor of science in chemistry under my supervision as per rules and regulations of yashwantrao chavan college of science, karad affiliated to Shivaji University , kolhapur during the academic year 2022-2023. this works present bonified work of the students.

Mr.G.B.Dhake
Department of chemistry
Assistant Professor

Dr.S.H.Burungale
Head of Department
chemistry

Head
Department of Chemistry
Yashwantrao Chavan College of Science, Karad

Place: Karad
Date:

Yashwantrao Chavan College of Science ★ Karad ★ CHEMISTRY

DEPARTMENT OF CHEMISTRY

DECLARATION

This is to certified that,

Sr.no	Name of the student	Roll no
1	Miss. Sakshi Sanjay Sawant	3128
2	Miss. Pooja Maruti Shinde	3138

Have submitted the project entitled "Analysis of calci um in Different pharmaceutical sample" For the year 2022-2023. This project was carried out under my guidance and supervision.

Mr.G.B.Dhake

Project Guide

Place: Karad
Date:

ACKNOWLEDGEMENT

I wish to convey my deep sense of gratitude to my project guide Mr.G.B.Dhake, Assistant professor, Department of chemistry, for his valuable guidance, keen interest, excellent suggestions and support during the course of this work.

I also extend my sincere thanks to Dr. S. H. Burungle, Head of Department of chemistry for providing the laboratory facilities.

My sincere thanks are due to Priciple,Dr.S.B.kengarfor his constant encouragement.

I am especially to the non-teaching members of this department for providing their valuable help in carrying out this project.

Finally I would like to thank who have helped directly or indirectly in completion of this project.

Sr.no	Name of the student	Roll no
1	Miss. Sakshi Sanjay Sawant	3128
2	Miss.Pooja Maruti Shinde	3138

Place: Karad
Date:

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Chapter - 1

Introduction of Calcium

Calcium accounts for I to 2 percent of adult human body weight over 99 percent of total body calcium is found in teeth and bones. The reminder is present in blood, extracellular fluid, muscle, and other tissues, where it plays a role in mediating vascular contraction and vasodilation, muscle contraction, nerve transmission, and glandular secretion.

In bone, calcium exists primarily in the form of hydroxyapatite (Caw (PO4)6 (OH)2), and bone minerals is almost 40 percent of the weight of bone. Bone is a dynamic tissue that is constantly undergoing osteoclastic bone resorption and osteoclastic bone formation. Bone formation exceeds resorption in growing children, is balanced with resorption in healthy adults, and lags behind resorption after menopause and with again in men and women. Each year, a portion of the skeleton is remodelled (reabsorbed and replaced by new bone). The rate of cortical (or compact) bone remodelling can be as high as 50 percent per year in young children and is about 5 percent per year in adults (parfitt, 1988). Trabecular (or cancellous) bone remodelling is about five — fold higher then cortical remodelling in adults. The skeleton has an obvious structural role and it also serves as a reservoir for calcium.

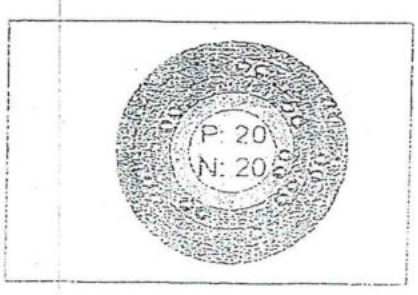
The group IIA of the periodic table contains the alkaline earth metals such as Ca, St, Ba and Ra. All the non metallic substances are insoluble in water and unchanged by five were called earths. Limes and magnesia showed alkaline reactions hence alkaline earths.

The name calcium is derived from latin word calas meaning lime was known as ear y as the first centuries when the ancient Romans prepared lime as CaO.

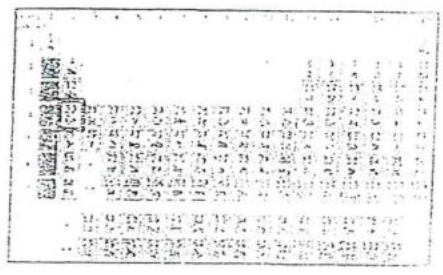
Atomic structure of Ca

II A Position of Ca in Periodic Table

Atomic structure of Ca



II A Position of Ca in Periodic Table



Properties of Calcium

The tensile property of calcium metal are greatly affected by impurities and in the pure form by the methods of fabrication. Calcium metal works upon mechanical possessing. Bulk calcium is soft, crystalline metal. It may be readily extruded on heating to 420 - 460°C. X-ray diffraction pattern of calcium samples exis s in only two allotropic form — face centered cubicand body centered cubic (464°C). according to Debye-Scherer, Ca exists in three allotropic modifications i.e. a-Ca-face centered cubic, 13-Ca-hexagonal close packed and y -Ca- body centered cubic. It readily forms awhite coating of nitrite in air, reacts with water by forming $Ca(OH)_2$, burns with ayellow red flame forming the largely the nitride. They are malleable, extrudable and machinable may be in rods, wires or plates. Calcium is cheapest of alkaline earth metals but more expensive than Sodium. Ca metal itself comates even in metallurgical work with some of its own compounds e.g. calcium silicide, calcium boride, calcium carbide, all of which are used as degasifiers, reductants and sources of calcium for alloys.

Physiological role

Daily body requirement is about 450 mg. The adult requirements of Ca vary. During pregnancy and lactation, there is greater depletion of Ca from the mother and the intake needs to be increased. On an average, 0 mg per kg of body weight per day should be sufficient.

The Ca play an important role to maintain some important body functions such as

i) Ca controls nerve excitability. The effect is mainly on the peripheral neuromuscular mechanism. Fibrillary twitching can be produced by per fusing a muscle with Ca free fluid. Automatic ganglia also become hyper irritable.

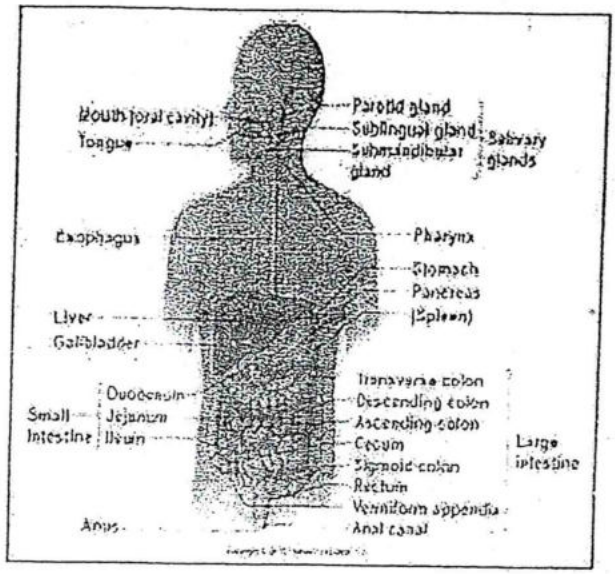
ii) it is necessary for the maintenance of the integrity of the skeletal muscles. An increase in the ionized Ca results in an increase in contractility and vice versa.

iii) It is very essential for maintaining the tone and contractility of heart. Ca is antidote to the depressant action of K.

iv) Tt aids rennin in the coagulation of milk in the stomach.

v) It is essential for the clotting of food. It decreases cellular permeability. It is therefore used in aliergic conditions to diminish exudation which produces wheals and rushes.Ca appears to serve as a constituent of the intercellular cement.

vi) Ca take part in the formation of certain tissues and bones. Normally 25 — 35% is excreted in the urine and the rest in the stools.



Calcium Deficiency

Calcium deficiency is a condition in which the body has an inadequate amount of calcium. Calcium is a mineral that is essential for many aspects of health , including the health of bones and also required for muscle contractions and relaxation, nerve and hormone function, and blood pressure regulation. Calcium must be ingested daily and absorbed effectively in order to maintain optimal health. Most people can get enough calcium by eating a variety of foods rich in calcium. Foods that naturally contain calcium include milk and other dairy products; green, leafy vegetables; seafood, nuts and dried beans. Calcium is also added to orange juice, breakfast cereals, breads, and other fortified food products .High dietary calcium intake is necessary for infants children and adolescents in orde to promote bone growth and formation. Pregnant women also have higher calcium needs, because it it required for the normal

development of fatal bones . In addition women who have reached menopause need to ensure an adequate amount of calcium intake to reduce the risk of osteoporosis.

Pharmaceutical Samples:-

Cipcal (250g),calotrack,selcal-500, calcimaxfort, MYCAL-D

Cipla ltd.

MRP:52.00 for 1 packet (5) (tablet each)

Composition

Vitamin D (12510) (calcium carbonate 625 mg)

Salt information

Vitamin D_3 (12510)

Typical usage :-

Vitamin D3 is used for the prevention and treatment of vitamin D deficiency.

Side effects of vitamin D_3 are uncommon these may include too much calcium in the blood (hypocalcaemia) or urine (hyper caliured) , leading to a feeling of sickness , loss of appetite: constipation, stomach ache , excessive thirst, muscle weakness, drownes or confusion.

Drug Interaction :-

When vitamin D_3 is used along with phenytoin, barbiturates or glucocorticoids, the effect of vitamin D_3 can be decreased . The effects of digitals and other cardiac glycoside may be increased when calcium is taken with vitamin D. Cholestyramine or paraffin oil may recue the gostrointes absorption of vitamin D.The anti-cancer drug actinomycin and drugs used to tread fungal infections may alter the vitamin D activity Always consult your physician for the change of dose regimen or an alternative drag of choice that may strictly be required.

Mechanism of action.

Vitamin D3 increases the absorption of calcium and phosphorous that are vital in forming and maintaining Strong bones. It is also required in regulating call growth and maintaining a healthy immune system

Calcium Carbonate (625 mg)

Typical usage.

To relieve the symptoms of indigestion, hearbarn, acidity and gases. **Side effects** :-

Constipation, burping, loss of appetite, dry mouth. Metallic taste, high levels of blood calcium, disturbance in the body's acid / base balance (alkalosis), changes in blood chemistry may lead to symptoms such as tiredness, irritable or stiff muscles or cramp and indigestion may occur after stopping the medicine.

Drug Interaction

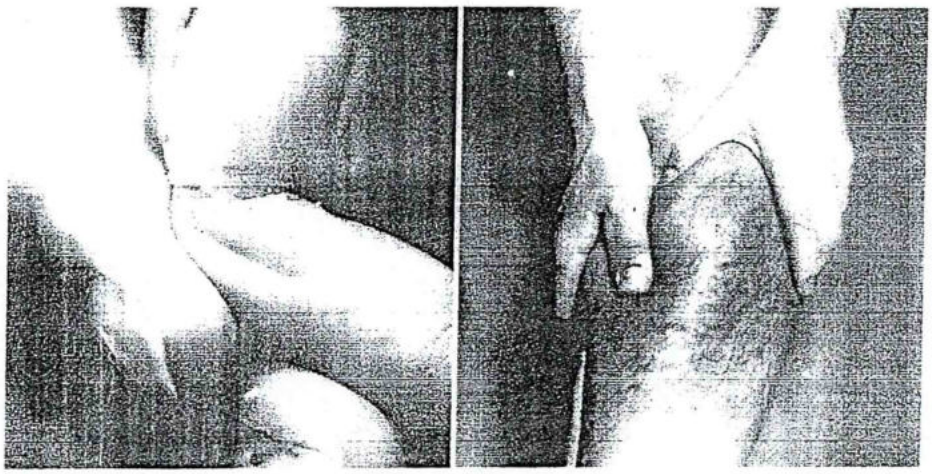
Takingcalcium carbonate with thiazide diuretics (bendroflumethiazide, hydrochlo-othiazide) or vitamin D may lead to high levels o..1 blood calcium and disturb the body's acid / base balance. Calcium carbonate may also integrative drug of choice that may strictly be required.

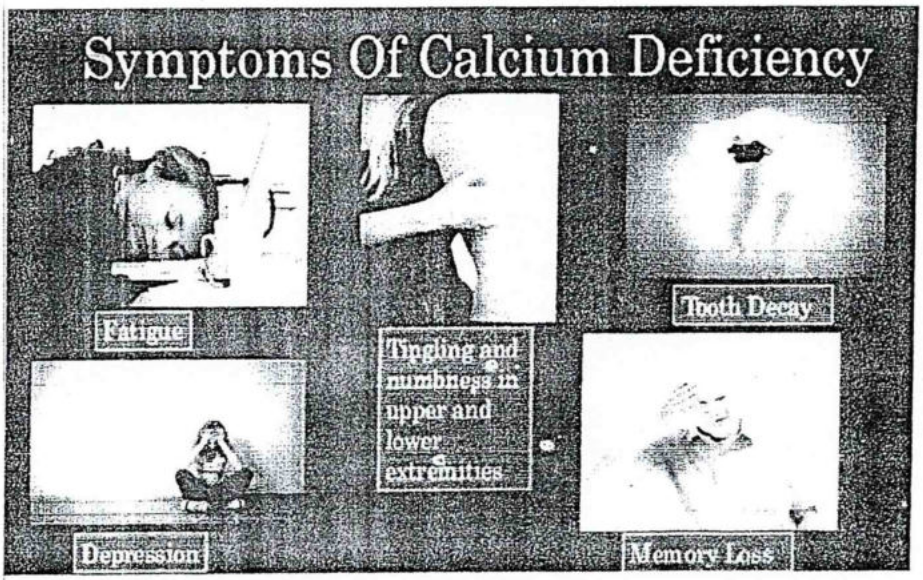
Mechanism of action.

Calcium carbonate is an antacid which neutralizes excess acid im the stomach.

Interactions:-

Can I take epical (25omg) during pregnancy / studies in animals have shown risk to feats. How're there are no sufficient studies in humans. This drug may be used in pregnant 200 men if benefit outweigh 45 the risk. Patients should follow the advice of the doctor regarding its use.





Chapter - 2
Analysis of calcium

Definition of Analysis:- The separating of any material or abstract entity into its constituent elements is called as Analysis.

Types of Analysis

Qualitative analysis

A qualitative analysis determines the presence or absence of a particular compound, but not the mass or concentration. By definition, qualitative analyses do not measure quantity.

Quantitative analysis

Gravimetric analysis

Gravimetric analysis involves determining the amount of material present by weighing the sample before and/or after some transformation. A common example used in undergraduate education is the determination of the amount of water in a hydrate by heating the sample to remove the water such that the difference in weight is due to the loss of water.

Volumetric analysis

Titration involves the addition of a reactant to a solution being analyzed until some equivalence point is reached. Often the amount of material in the solution being analyzed may be determined. Most familiar to those who have taken chemistry during secondary education is the acid-base titration involving a color changing indicator. There are many other types of titrations, for example potentiometric titrations. These titrations may use different types of indicators to reach some equivalence point.

Ethylenediaminetetraacetic acid

Widely abbreviated as EDTA (for other names, see Table), is an aminopolycarboxylic acid and a colorless, water-soluble solid. Its conjugate base is named **ethylenediaminetetraacetate.** It is widely used to dissolve lime scale. Its usefulness arises because of its role as a hexadentale ("six-toothed") ligand and chelating agent, i.e., its ability to "sequester" metal ions such as Ca^{2+} and Fe^{3+}. After being bound by EDTA, metal ions remain in solution but exhibit diminished reactivity. EDTA is produced as several salts, notably disodium EDTA and calcium disodium EDTA.

Complex titration with EDTA

EDTA, ethylenediaminetetraacetic acid, has four carboxyl groups and two amine groups that can act as electron pair donors, or Lewis bases. The ability of EDTA to potentially donate its six lone pairs of electrons for the formation of coordinate covalent bonds to metal cations makes EDTA a **hexadentate ligand.** However, in practice EDTA is usually only partially ionized, and thus forms fewer than six coordinate covalent bonds with metal cations.

Disodium EDTA is commonly used to standardize aqueous solutions of transition metal cations. Disodium EDTA (often written as **Na2H2Y**) only forms four coordinate covalent bonds to metal cations at pH values < 12. In this pH range, the amine groups remain protonated and thus unable to donate electrons to the formation of coordinate covalent bonds. Note that the shorthand form **$Na_{i\_x}11,Y$** can be used to represent any species of EDTA, with x designating the number of acidic protons bonded to the EDTA molecule.

EDTA forms an octahedral complex with most 2+ metal cations, M^{2+}, in aqueous solution. The main reason that EDTA is used so extensively in the standardization of metal cation solutions is that the formation constant for most metal cation-EDTA complexes is very high, meaning that the equilibrium for the reaction:

$$M^{2+} + H_4Y \rightarrow MH_2Y + 2H^2$$

Role of indicator

Ferrochrorne Black T

I) It is a complex metric indicator that is part of the complex metric titrations

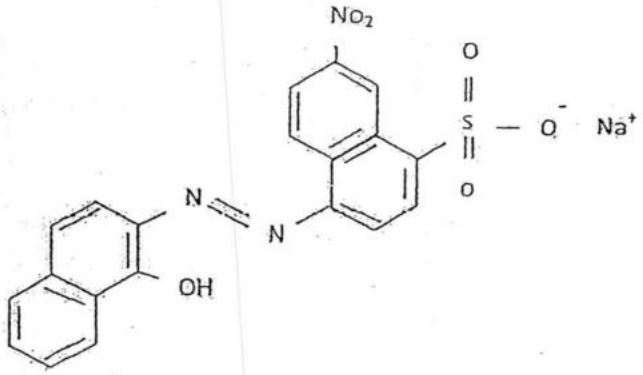
ii) In its protonated form, Ferrochrome Black T is blue. It turns red when it to forms a complex with calcium magnesium, or other metal ions.

iii)EBT is blue in buffered solution at pH lo. It turns red when Ca2+ ions are added

Definition Eriochrome Black T :-

It is a complex metric indicator that is part of the complexmetric titrations

Structure :-



IUPAC Name

Sodium 1-(I-hydroxynaphthylazo)-6-nitro -2-naphthol-4 - sulfonate

Systematic IUPAC Name :-

Sodium 4 — (2 (I- hydroxynaphfnalenz-y)hydrazine-I- ylidene) -7-nitro-3-oxo -3,4-dihydranaphthalene I- Sulfonate

CHAPTER-3

Experimental Procedure

Aim :- Analysis of Calcium in different pharmaceautical samples.

Apparatus :-Beakers, Burette, Measuring Cylinder , Volumetric Flask (100ml) , Whatmann Filter paper , conical flask, rod.

Chemical :- Tablets (Cipal & Calotrack,Shelcal-500, MYCAL-D, Calcimax-forte) ,EDTA solution (0.01m) , Ammonia Buffer solution (pH-10),Erichrome Black T indicator , Distilled water.

Procedure :-

1) A supplement tablet (Normally about 300 mg) of calcium ion was taken .
2) Then it is dissolved in minimum amount of water.
3) Then it is filtered & washing collected in 100 ml beaker.
4) It is diluted with 100ml Volumetric flask.
5) Several 2 ml sample of the tablet solution were titrated with 0.01 M EDTA solution.
6) Erichrome Black T indicator an dass one test tube of Ammonia Buffer solution is used in conival flask.
7) The mean corrected titration volume was observed.

For Cipcal Tablet :-

Observations :-

1) Weight of Cipcal tablet=300 mg= 0.300 g=0.0300×10^{-3}.
2) Solution in Burette = 0.01 M EDTA.
3) Solution in conical flask 2 cm^3 diluted sol^n +1 test tube Ammonia Buffer sol^n.
4) Indicator = Erichrome black T indicator
5) End Point = Wine Red to Sky Blue.
6) Reaction=

$$Ca^{2+} + EDTA^{-4}(aq) \rightarrow [Ca\ (EDTA)\ ]^{-2}$$

$$Kr = 5.0 \times 10^{10}$$

Observation Table :-

Readings	Burette Reading in cm^3			C.B.R in Cm^3
	1	2	3	
Final	**14.0**	**14.0**	**14.5**	
Initial	**0.0**	**0.0**	**0.0**	14.0 cm^3
Difference	**14.0**	**14.0**	**14.5**	

Calculations :-

$$\text{Mass of calcium (mg)} = \frac{\text{Volume} \times \text{Molarity}}{\text{EDTA (mg)} \times \text{EDTA}\left(\frac{\text{mol}}{c}\right)} \times \frac{1 \text{ mol of calcium}}{1 \text{ mol of EDTA}}$$

$$\times \frac{4.089 \text{ Clcium}}{1 \text{ ml calcium}} \times \frac{100\text{ml total Volume}}{2\text{ml sample Volume}}$$

(converts to g of Calcium) (converts to mg Calcium)

$$\text{Mass of calcium} = \frac{0.014 \times 0.01 \text{ mol}}{\text{Lit}} \times \frac{1 \text{ mol of } Ca^{2+}}{1 \text{ mol of EDTA}} \times \frac{40.089 Ca^{2+}}{1 \text{ mol } Ca^{2+}} \times \frac{1000 \text{ mg}}{1\ mg} \times \frac{100 \text{ ml total Volume}}{2 \text{ ml sample Volume}}$$

Mass of calcium = 0.014 x 0.01 x 1 x40.08 x 1000 x 50

= 280.54 mg

$$\textbf{\% of calcium} = \frac{280.54 \times 100}{0.300}$$

= 93.52

For Calotrack Tablet:-

Observation :-

1) Weight of Cipcal tablet=300 mg= 0.300 g=0.0300 $x10^{-3}$.
2) Solution in Burette = 0.01 M EDTA.
3) Solution in conical flask 2 cm^3 diluted sol^n +1 test tube Ammonia Buffer sol^n.
4) Indicator = Erichrome black T indicator
5) End Point = Wine Red to Sky Blue.
6) Reaction=

$$Ca^{2+} + EDTA^{-4}(aq) \rightarrow [Ca(EDTA)]^{-2}$$

$$Kr = 5.0 \times 10^{10}$$

Observation Table :-

Readings	Burette Reading in cm^3			C.B.R in Cm^3
	1	2	3	
Final	13.0	13.5	13.5	13.5 cm^3
Initial	0.0	0.0	0.0	
Difference	13.0	13.5	13.5	

Calculations :-

$$\text{Mass of calcium (mg)} = \frac{\text{Volume} \times \text{Molarity}}{\text{EDTA (mg)} \times \text{EDTA}\left(\frac{\text{mol}}{c}\right)} \times \frac{1 \text{ mol of calcium}}{1 \text{ mol of EDTA}}$$

$$\times \frac{4.089 \text{ Clcium}}{1 \text{ ml calcium}} \times \frac{100\text{ml total Volume}}{2\text{ml sample Volume}}$$

(converts to g of Calcium) (converts to mg Calcium)

$$\text{Mass of calcium} = \frac{0.0135 \times 0.01 \text{ mol}}{\text{Lit}} \times \frac{1 \text{ mol of } Ca^{2+}}{1 \text{ mol of EDTA}} \times \frac{40.089 Ca^{2+}}{1 \text{ mol } Ca^{2+}} \times \frac{1000 \text{ mg}}{1\ mg} \times \frac{100 \text{ ml total Volume}}{2 \text{ ml sample Volume}}$$

Mass of calcium = 0.0135 x 0.01 x 1 x40.08 x 1000 x 50

= 280.54 mg

$$\textbf{\% of calcium} = \frac{270.54 \times 100}{0.300}$$

= 90.18%

For Shelcal -500 Tablet:-

Observation :-

1) Weight of shelcal-500 tablet=300 mg= 0.300 g=0.0300 $x10^{-3}$.
2) Solution in Burette = 0.01 M EDTA.
3) Solution in conical flask 2 cm^3 diluted sol^n +1 test tube Ammonia Buffer sol^n.
4) Indicator = Erichrome black T indicator
5) End Point = Wine Red to Sky Blue.
6) Reaction=

$$Ca^{2+} + EDTA^{-4}(aq) \rightarrow [Ca(EDTA)]^{-2}$$

$$K_f = 5.0 \times 10^{10}$$

Observation Table :-

Readings	Burette Reading in cm^3			C.B.R in Cm^3
	1	2	3	
Final	10.4	10.5	10.5	10.5 cm^3
Initial	0.0	0.0	0.0	
Difference	10.4	10.5	10.5	

Calculations :-

$$\text{Mass of calcium (mg)} = \frac{\text{Volume} \times \text{Molarity}}{\text{EDTA (mg)} \times \text{EDTA}\left(\frac{\text{mol}}{\text{c}}\right)} \times \frac{1 \text{ mol of calcium}}{1 \text{ mol of EDTA}}$$

$$\times \frac{4.089 \text{ Clcium}}{1 \text{ ml calcium}} \times \frac{100\text{ml total Volume}}{2\text{ml sample Volume}}$$

(converts to g of Calcium) (converts to mg Calcium)

$$\text{Mass of calcium} = \frac{0.0105 \times 0.01 \text{ mol}}{\text{Lit}} \times \frac{1 \text{ mol of } Ca^{2+}}{1 \text{ mol of EDTA}} \times \frac{40.089 Ca^{2+}}{1 \text{ mol } Ca^{2+}} \times \frac{1000 \text{ mg}}{1\ mg} \times \frac{100 \text{ ml total Volume}}{2 \text{ ml sample Volume}}$$

Mass of calcium = 0.0105 x 0.01 x 1 x40.08 x 1000 x 50

= 210.42 mg

$$\textbf{\% of calcium} = \frac{210.42 \times 100}{0.300}$$

= 72.14%

For MYCAL-DTablet:-

Observation :-

1) Weight of MYCAL-D tablet=300 mg= 0.300 g=0.0300 $x10^{-3}$.
2) Solution in Burette = 0.01 M EDTA.
3) Solution in conical flask 2 cm^3 diluted sol^n +1 test tube Ammonia Buffer sol^n.
4) Indicator = Erichrome black T indicator
5) End Point = Wine Red to Sky Blue.
6) Reaction=

$$Ca^{2+} + EDTA^{-4}(aq) \rightarrow [Ca(EDTA)]^{-2}$$

$$Kr = 5.0 \times 10^{10}$$

Observation Table :-

Readings	Burette Reading in cm^3			C.B.R in Cm^3
	1	2	3	
Final	10.9	11.0	11.0	
Initial	0.0	0.0	0.0	10.5 cm^3
Difference	10.9	11.0	11.0	

Calculations :-

$$\text{Mass of calcium (mg)} = \frac{\text{Volume} \times \text{Molarity}}{\text{EDTA (mg)} \times \text{EDTA}\left(\frac{\text{mol}}{c}\right)} \times \frac{1 \text{ mol of calcium}}{1 \text{ mol of EDTA}}$$

$$\times \frac{4.089 \text{ Clcium}}{1 \text{ ml calcium}} \times \frac{100\text{ml total Volume}}{2\text{ml sample Volume}}$$

(converts to g of Calcium) (converts to mg Calcium)

$$\text{Mass of calcium} = \frac{0.011 \times 0.01 \text{ mol}}{\text{Lit}} \times \frac{1 \text{ mol of } Ca^{2+}}{1 \text{ mol of EDTA}} \times \frac{40.089 Ca^{2+}}{1 \text{ mol } Ca^{2+}} \times$$

$$\frac{1000 \text{ mg}}{1\ mg} \times \frac{100 \text{ ml total Volume}}{2 \text{ ml sample Volume}}$$

Mass of calcium = 0.011 x 0.01 x 1 x40.08 x 1000 x 50

= 220.44 mg

$$\textbf{\% of calcium} = \frac{220.42 \times 100}{0.300}$$

= 73.48%

For Calcimax-forte Tablet:-

Observation :-

1) Weight of Calcimax-fort tablet=300 mg= 0.300 g=0.0300 $x10^{-3}$.
2) Solution in Burette = 0.01 M EDTA.
3) Solution in conical flask 2 cm^3 diluted sol^n +1 test tube Ammonia Buffer sol^n.
4) Indicator = Erichrome black T indicator
5) End Point = Wine Red to Sky Blue.
6) Reaction=

$$Ca^{2+} + EDTA^{-4}(aq) \rightarrow [Ca(EDTA)]^{-2}$$

$$Kr = 5.0 \times 10^{10}$$

Observation Table :-

Readings	Burette Reading in cm^3			C.B.R in Cm^3
	1	2	3	
Final	11.8	12.0	12.0	12.0 cm^3
Initial	0.0	0.0	0.0	
Difference	11.8	12.0	12.0	

Calculations :-

$$\text{Mass of calcium (mg)} = \frac{\text{Volume} \times \text{Molarity}}{\text{EDTA (mg)} \times \text{EDTA}\left(\frac{\text{mol}}{c}\right)} \times \frac{1 \text{ mol of calcium}}{1 \text{ mol of EDTA}}$$

$$\times \frac{4.089 \text{ Clcium}}{1 \text{ ml calcium}} \times \frac{100\text{ml total Volume}}{2\text{ml sample Volume}}$$

(converts to g of Calcium) (converts to mg Calcium)

$$\text{Mass of calcium} = \frac{0.012 \times 0.01 \text{ mol}}{\text{Lit}} \times \frac{1 \text{ mol of } Ca^{2+}}{1 \text{ mol of EDTA}} \times \frac{40.089 Ca^{2+}}{1 \text{ mol } Ca^{2+}} \times \frac{1000 \text{ mg}}{1\ mg} \times \frac{100 \text{ ml total Volume}}{2 \text{ ml sample Volume}}$$

Mass of calcium = 0.012 x 0.01 x 1 x40.08 x 1000 x 50

= 220.44 mg

$$\text{\% of calcium} = \frac{240.48 \times 100}{0.300}$$

= 80.16%

CHAPTER -4

Results :-

1) The Mass of Calcium in Cipcal Tablet = 280.56 mg
2) The Mass of Calcium in Calotrack Tablt = 270.54 mg
3) The Mass of Calcium in Shelcal-500 Tablet = 210.42 mg
4) The Mass of Calcium in MYCAL-D Tablet = 220.44 mg
5) The Mass of Calcium in Calcimax –forte Tablet = 24048 mg

CHAPTER -5

Conclusion :-

It conclude that Mass of Calcium ion in **Cipcal** tablet is about 93.52 % and 280.56 mg % also in **Calotrack** tablet Mass of calcium is about 90.18 % and 270.54 mg & also in **Shelcal -500** is about 72.14 % % 210.42 mg And also in **MYCAl –D** 73.48 % & 220.44 mg & in **Calcimax –forte** is 80.16 %240.48 mg. It is observed that Mass of calcium is different in different tablet is in different volume.

References:

1) www.ijrpbsonline.com
2) www.chemistry.com

28 9-12

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE

KARAD



BSc II

ENVIRONMENTAL STUDIES

UNDER SHIVAJI UNIVERSITY, KOLHAPUR

2022-2023

A PROJECT REPORT ON

STUDY OF DISASTER MANAGEMENT RELATED TO MALIN LANDSLIDE

SUBMITTED BY

Sr.No	Name Of Student	Roll.No	Exam Seat No
1.	Jagadale Sanika Ramchandra	2047	26875
2.	Patil Shruti Sanjay	2058	26879
3.	Pol Shraddha Vilas	2061	26881
4.	Shinde Asmita Nitin	2026	
5.	Pawar Prachi Bajarang	2059	26890

UNDER GUIDANCE OF

Mrs. P.A.Patil (M.sc. B.Ed. BJC)

Exam Seat No. -

Date: 1105-2023.

Roll No.- 2047, 2058, 2061, 2026, 2059.

Shri Shivaji Education Society Karad, Board for Higher Education's

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Vidyanagar, Karad – 415 124

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Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. Jagadale Sanika Ramchandra

Patil Shruti Sanjay

Pal Shraddha Vilas

Shinde Asmita Nitin

Pawar Prachi Bajarang

of B.Sc. II have completed the Environmental project satisfactorily on "Study of disaster management related to Malin Landslide" *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2022-23.*

11.5.23

Co-ordinator

Head of Dept.

Principal

Head
Department of Pollution
Yashwantrao Chavan College of
Science, Karad

Yashwantrao Chavan College of Science
POLLUTION
Karad

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Yashwantrao Chavan College Of Science,Karad



Under Shivaji University,Kolhapur

B.Sc. – II

2022-2023

Environment studies

A project On

"Study On Public Awareness Programes In Villages"

Submitted by :

Sr.No.	Student Name	Roll No.	Exam Seat No
1.	Bhoite Vishal Hanmant	2091	26665
2.	Chavan Aditya Prakash	2092	26641
3.	Dalavi Atharvraj Sambhaji	2094	26857
4.	Desai Gaurav Shankar	2095	26666
5	Desai Omkar Ghamaji	2096	22667

Under The Guidance Of

Mrs. Patil P.A (M.Sc.B.ed.BJC)

Exam Seat No. -

Date: 11/05/2023

Roll No.- 2091, 2092, 2094, 2095, 2096.

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2). chavan Aditya Prakash

3). Dalavi Atharvraj sambhaji

4). Desai Gaurav shankar

5). Desai omkar shamaji

of B.Sc. II have completed the Environmental project satisfactorily on "study on public awareness programes in villages" *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2022-23.*

11.05.23

Co-ordinator

Head of Dept.

Principal

Head
Department of Pollution
Yashwantrao Chavan College of
Science, Karad

Yashwantrao Chavan College of Science Karad POLLUTION

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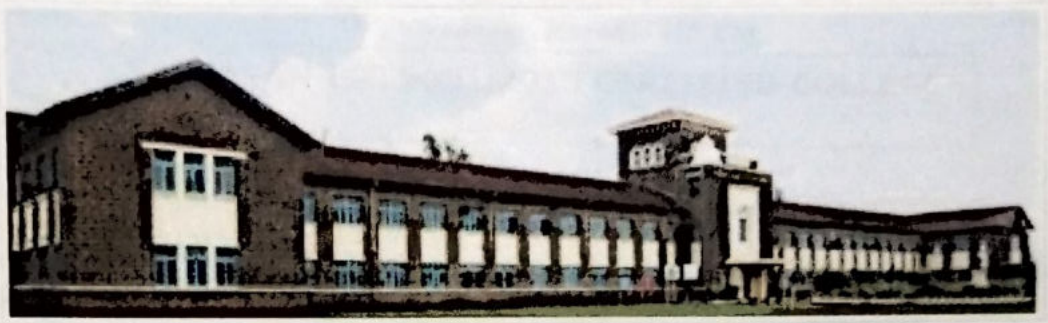
Yashwantrao Chavan College Of Science,Karad



Under Shivaji University,Kolhapur

B.Sc. -II

2022-2023

Environment studies

A project on

Study Of Disaster Management With Regards To Earthquakes

Submitted by :

Sr.No.	Student Name	Roll No.	Exam Seat No.
1.	Desai Suyog Surendra	2097	26859
2.	Deshmukh Ashwin Abhijeet	2098	26668
3.	Jadhav Pramod Shankar	2101	26669
4.	Jadhav Vishal Daji	2102	
5.	Kambale Prakash Keshav prashant (PRN)	2103	26686

Under The Guidance Of

Mrs. Patil P.A (M.Sc.B.ed.BJC)

Exam Seat No. -

Date: 11-5-2023

Roll No.- 2097, 2098, 2101, 2102, 2103

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Environmental Studies

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This is to certify that Mr. / Miss. 1) Desai Suyog Surendra

2) Deshmukh Ashwin Abhijeet

3) Jadhav Pramod Shankar

4) Jadhav Vishal Daji

5) Kambale Prakash Keshav

of B.Sc. II have completed the Environmental project satisfactorily on "Study of Disaster management with Regards To Earthquakes" *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2022-23.*

11-5-23

Co-ordinator

Head of Dept.

Principal

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science Karad POLLUTION

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE,



VIDYANAGAR, KARAD.

UNDER SHIVAJI UNIVERSITY, KOLHAPUR.

B.SC. II

Of the

2022-2023

Environment studies

A project report

On

"Study Of Awareness and Human Rights"

Submitted by

Sr. no.	Name of the student	Roll	Exam seat no.
1	Gaurav Bhagwan Kumbhar	2104	26670
2	Omkar Jalindar Mane	2105	26672
3	Saurabh Krushnat Mane	2106	26674
4	Shubham Satish Mane	2107	26673
5	Unmesh Suresh Mane	2108	26675

Under the guidance of

Mrs. Patil P.A. (M.Sc. B.Ed BJC)

Exam Seat No. -

Date: 11/05/2023

Roll No.- 2104, 2105, 2106, 2107, 2108.

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Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. 1) Gaurav bhagwan kumbhar

2) omkar Jalindar mane

3) Saurabh krushnat mane

4) shubham satish mane

5) unmesh suresh mane

of B.Sc. II have completed the Environmental project satisfactorily on "Study of ~~Area~~ Awareness and Human Rights ....." *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2022-23.*

11.05.23

Co-ordinator

Head of Dept.

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

Principal

Yashwantrao Chavan College of Science
POLLUTION

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



UNDER

SHIVAJI UNIVERSITY, KOLHAPUR.

B.SC. II

OF THE

2022/2023

Environment studies

A Project On

"Study of impact of urbanization on environment"

Submitted by

Sr.no.	Name of the student	Roll no	Exam seat no.	Sign
1	Marathe Sanket Hanmant	2109	26676	
2	Pawar Saurabh Shankar	2113	26638	
3	Salave Rohit Ramchandra	2114	26678	Salave
4	Salukh omkar Hanmantrao.		26679	

Under The Guidance Of
Mrs. Patil P.A [M.Sc B.ed.BJC]

Exam Seat No. -

Date: 11-05-2023

Roll No.- 2109, 2112, 2113, 2114

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Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. (1) Marathe Sanket Hanmant.

(2) Pawar Saurabh Shankar

(3) Salave Rohit Ramchandra

(4) Pawar Amit Anil

(5) Salukhe Omkar Annachu.

of B.Sc. II have completed the Environmental project satisfactorily on "Study of the impact of Urbanization on Environment" *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2022-23.*

11.05.23

Co-ordinator

Head of Dept.

Principal

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

Yashwantrao Chavan College of Science ★ POLLUTION ★ Karad

Shivaji Shikshan Sanstha's

YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



UNDER SHIVAJI UNIVERSITY, KOLHAPUR

B.Sc.II

2022-2023

Environmental Studies

A project On,

"Study Of Water Conservation Techniques"

Submitted by:

Sr. No.	Name of Student	Roll no.	Exam no
1	Salunkhe Prathamesh Manik	2115	26689
2	Thorat Ganesh Mahesh	2117	26682
3	Thorat Sahil Dipak	2119	26684
4	Mageri Chaitanya Tuljaram	2122	26671
5	Rajput Abhaysinh Dipak	2029	26690

Under guidance of,

Mrs. Patil P.A (M.Sc B.Ed. BJC)

Exam Seat No. -

Date: 11-05-2023

Roll No.- 2115, 2117, 2119, 2122, 2029

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Environmental Studies

CERTIFICATE

This is to certify that Mr. / ~~Miss.~~ Salunkhe Prathamesh Manik

Thorat Ganesh Mahesh

Thorat Sahil Dipak

Mageri Chaitanya Tukjaram

Rajput Abhaysinh Dipak

of B.Sc. II have completed the Environmental project satisfactorily on ""Study of water conservation Techniques"

" as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2022-23.

11.5.2023

Co-ordinator

Head of Dept.

Head
Department of Pollution
Yashwantrao Chavan College of
Science, Karad

Principal

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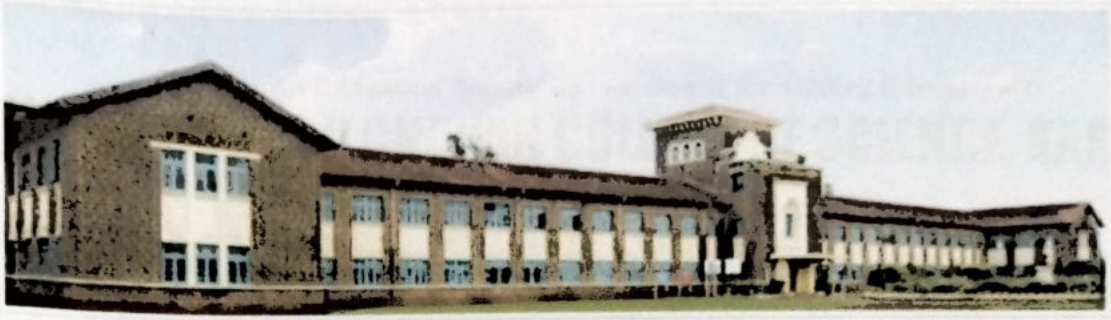
YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD.



UNDER SHIVAJI UNIVERSITY, KOLHAPUR

B.Sc.II

2022-2023

Environmental Studies

A Project On

"Study Of Dams And Their Effects On Environment"

Submitted by :

Sr. No.	Name of Student	Roll no.	Exam no
1	Chavan Sneha Ravindra	2093	26856
2	Gholap Sanika Tanaji	2099	26715
3	Hogale Aishwarya Sanjay	2100	26713
4	Nalawade Shruti Laxman	2110	26731
5	Danane Sonali Dattatray	2121	26858

Under Guidance of

Mrs. Patil P.A (M.sc. B.ed. BJC)

Exam Seat No. -

Date: 11-05-2023

Roll No.- 2093, 2100, 2121
2099, 2110,

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Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. ..Chavan....Sneha....Ravindra.....
..Kholap....Sanika....Tanaji.....
....Nagale....Aishwarya....Sanjay.....
..Nalawade....Shruti....Laxman.....
..Danane....Sonali....Dattatray.....

of B.Sc. II have completed the Environmental project satisfactorily on "...Study....of....Dams....&...Their...effects.....
....on..... Environment.....:....." *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2022-23.*

Co-ordinator

Head of Dept.

Principal

Head
Department of Pollution
Yashwantrao Chavan College of
Science, Karad

Yashwantrao Chavan College of Science Karad
POLLUTION

BSc-III

group - 19

Yashwantrao Chavan College Of Science, Karad



Under Shivaji University, Kolhapur

B.Sc. - II

2022 - 2023

Environment Studies

A Project on

"To study of Impact of Tsunami of Environment "

Submitted by :

Sr. No	Student Name	Roll No.	Exam Seat No.
1.	Snehal Shrikant Naik	2126	26860
2.	Sakshi Pandurang Nikam	2111	26720
3.	Ankita Rajendra Thorat	2116	26734
4.	Vaishnavi Dilip Yadav	2120	26685
5.	Pournima Balkrushna Thorat	2118	26683

Under The Guidance Of :

Mrs. Patil P.A (M.Sc. B.Ed. BJC)

Exam Seat No. -

Date: 11/05/2023

Roll No.- 2126, 2111, 2116, 2120, 2118

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Environmental Studies

CERTIFICATE

This is to certify that ~~Mr.~~ / Miss. ...Snehal Shrikant Naik.....

...Sakshi Pandurang Nikam.....

...Ankita Rajendra Thorat.....

...Vaishnavi Dilip Yadav.....

...Poornima Balkrushna Thorat.....

of B.Sc. II have completed the Environmental project satisfactorily on ".....To study of impact of Tsunami on Environment.....

...." *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2022-23.*

Co-ordinator 11-5-23

Head of Dept.

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

Principal

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Under Shivaji university, Kolhapur

B.Sc. – II

2022– 2023

Environment studies

A project on

Study of ETP Plant in Koyna Dairy

Submitted by :

Sr.No	Student name	Roll no.	Exam seat no.
1	Aniket Rajendra Panugade	2190	26831
2	Prathmesh Ananda Patil	2192	26822
3	Sushant Uttam Phuke	2196	26832
4	Kadam prathmesh poornath		26778
5	Jadhav prasad shrimant		26828

Under The Guidannce Of :

Mrs.Patil P.A (M.Sc.B.Ed.BJC)

Exam Seat No. -

Date: 12-05-2023

Roll No.- 2190, 2192, 2196

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Environmental Studies

CERTIFICATE

This is to certify that Mr. / ~~Mrs.~~ 1) Aniket Rajendra Panugade

2) Prathmesh Ananda Patil

3) sushant Uttam Phuke

4) kadam prathmesh poornath

5) Jadhav prasad Shrimant

of B.Sc. II have completed the Environmental project satisfactorily on "Study of E.T.P. Plant in kayna dairy"

....." *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2022-23.*

12/05/23

Co-ordinator

Head of Dept.

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

Principal

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Under Shivaji university, Kolhapur

B.Sc. – II

2022 – 2023

Environment studies

A Project. on

Study Of ETP Plant in Sahyadri Sugar Industry

Submitted by :

Sr.No	Studant name	Roll no.	Exam seat no.
1	Pankaj Shrikant Vadkar	2204	26824
2	Rohan jaywant Yadav	2209	
3	Shambhuraj Sanjay Yelave	2210	26827

4. Yadav Rohan Jaywant 26908

Under The Guidannce Of :

Mrs.Patil P.A (M.Sc.B.Ed.BJC)

Exam Seat No. -

Date: 12-05-23

Roll No.- 2204, 2209, 2210

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Environmental Studies

CERTIFICATE

This is to certify that Mr. / Miss. 1: Pankaj Shrikant Vadkar:
2: Rohan Jaywant Yadav:
3: Shambhuraj Sanjay Yelave:
4: Yadav Rohan Jaywant
.....

of B.Sc. II have completed the Environmental project satisfactorily on "Study of ETP Plant In Sahyadri Sugar Industry:....." *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2022-23.*

12.05.2023

Co-ordinator

Head of Dept.

Principal

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

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UNDER SHIVAJI UNIVERSITY, KOLHAPUR

B.Sc.II

2022-2023

Environmental Studies

A

Project Report

On,

"Study Of Hospital Waste Management In Karad City "

Submitted by,

Sr. No.	Name of Student	Roll no.	Exam no
1	Garud Jayadarsh Shivaji	2136	26735
2	Gharge Rohan Vijay	2137	26737
3	Kadam Pratham Mangesh	2138	26738
4	Kadam Saurabh Ashok	2139	26752
5	Kadam Varun Sanjay	2140	26753

Under guidance of,

Patil P.A (M.Sc B.Ed. B.JC)

Exam Seat No. - 26735, 26737, 26738, 26752, 26753 Date: 12-05-23

Roll No.- 2136, 2137, 2138, 2139, 2140

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Environmental Studies

CERTIFICATE

This is to certify that Mr. / ~~Miss.~~ 1) Garud Jayadarsh shivaji

2) Ghange Rohan Vijay

3) Kadam Ratham Mangesh

4) Kadam Saurabh Ashok

5) Kadam Varun Sanjay

of B.Sc. II have completed the Environmental project satisfactorily on "Study of Hospital Waste Management in Karad city" *as prescribed by Shivaji University, Kolhapur as a fulfillment of syllabus during the year 2022-23.*

12.05.23

Co-ordinator

Head of Dept.

Principal

Head
Department of Pollution
Yashwantrao Chavan College of Science, Karad

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YASHWANTRAO CHAVAN COLLEGE OF SCIENCE, KARAD



Under Shivaji university, Kolhapur
BSC III Year
2022-2023
Department of Pollution

A Project on

"STUDY OF ROLL OF GREEN AUDIT IN ENVIRONMENT"

Submitted by

Sr.no	Student Name	Rollno	Exam no
1	Mrs.Abhishek Ajay Bhosale	?	38628
2	Mrs.Shubham Jayawant Shinde	?	42110

UNDER THE GUIDANCE OF
Prof.Patil.P.A. [M.Sc.B.Ed.BJC]

Exam Seat No. - 38628 Date: 10/05/23
Roll No.-

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Department of Pollution

This is to certify that Shri / Miss. Abhishek Ajay Bhosale

of B. Sc. III Pollution has completed Project work on "Study of Roll of Green audit in environment"

satisfactorily prescribed by Shivaji University, Kolhapur as a fulfillment of practical syllabus during the year 2022 - 2023.

Examined
23-5-2023
(Dr. B. V. Jadhav)

Teacher In-charge Examiner Head

Yashwantrao Chavan College of Science, Karad
POLLUTION