

Seat No.	
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B.Sc. (Part - II) Semester - II Examination, November 2018

MICROBIOLOGY
 Medical Microbiology, Microbial Techniques and
 Bioinstrumentation (Paper - III)

Sub. Code: 59688

Total Marks : 50

Day and Date : Friday, 02 - 11 - 2018
 Time : 3.00 p.m. to 5.00 p.m.

Instructions : 1) All questions are compulsory.
 2) Draw neat labelled diagrams wherever necessary.
 3) Figures to the right indicate full marks

Q1) Rewrite the following sentences by selecting the correct answer from the given alternatives

- a) The opacity of colony to transmitted light is described as
 - i) Elevation
 - ii) Margin
 - iii) Consistency
 - iv) Opacity
- b) Sedimentation rate of a biomolecule is expressed in _____ unit
 - i) Micron
 - ii) Svedberg
 - iii) Dalton
 - iv) μm
- c) The technique of chromatography was invented by _____
 - i) Beer
 - ii) Tiselius
 - iii) M. Tswett
 - iv) Svedberg
- d) Capsulated pathogens are virulent because capsule is _____
 - i) Richat's water
 - ii) Polypeptide
 - iii) Antigenic
 - iv) Antiphagocytic



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e) _____ is an obligate anaerobe.

i) Clostridium tetani

ii) Bacillus

iii) Acute

iv) Mixed

v) Primary

vi) Aniline

vii) Phenol red

viii) Thioglycolate broth

ix) Glucose phosphate broth

x) Peptone water

xi) Infectious agent

xii) Pathogen

xiii) Vectors

xiv) Carriers

xv) Parasites

xvi) Fomites

xvii) Micro-organisms

xviii) Carriers

xix) Parasites

xx) Fomites

xxi) Micro-organisms

xxii) Carriers

xxiii) Parasites

xxiv) Fomites

xxv) Micro-organisms

xxvi) Carriers

xxvii) Parasites

xxviii) Fomites

xxix) Micro-organisms

[20]

Q3) Short notes (any four):

a) Biochemical properties in bacterial classification.

b) Applications of centrifugation.

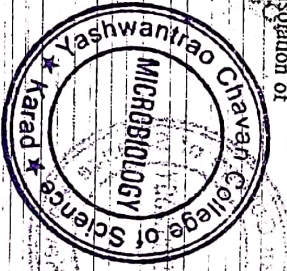
c) Sugar fermentation.

d) Types of diseases.

e) Gas pak anaerobic jar.

f) Carriers.

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B.Sc. (Part - II) Semester - II Examination, November-2018
MICROBIOLOGY

Applied Microbiology (Paper - I)
 Sub. Code: 59688

Total Marks : 50

Day and Date : Saturday, 03 - 11 - 2018

Time : 3.00 p.m. to 5.00 p.m.

Instructions :

- 1) All questions are compulsory.
- 2) Draw neat labeled diagram wherever necessary.
- 3) Figures to the right indicate full marks.

Q1) Rewrite the following sentences by selecting the correct answer from the given alternatives: [10]

a) _____ is the source of carbon in koser's citrate medium.

- i) Glucose
- ii) Na-Citrate
- iii) Xylose
- iv) Lactose

b) Dilution of methylene blue used in MBRT test is _____

- i) 1 : 250
- ii) 1 : 25
- iii) 1 : 2500
- iv) 1 : 2,50,000

c) Impingent in liquid technique is used for microbiological examination of _____

- i) Air
- ii) Water
- iii) Milk
- iv) Food

d) Efficiency of milk pasteurization is detected by _____ test.

- i) MBRT
- ii) Phosphatase
- iii) Resazurin
- iv) IMVIC test



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e) _____ is an example of perishable food.

- i) Fruit
- ii) Onion

f) The process of keeping out micro organism is called _____

- ii) Milk
- iv) Potato

g) Sterilization

iii) Disinfection

g) Gamma rays used for _____

i) Disinfection

iii) Cold sterilization

h) EMB agar is used for _____ test.

i) Presumptive

ii) Confirmed

i) Kovacs reagent is used to detect _____ production.

ii) Acid

iii) Acetoin

j) _____ is an indicator of faecal pollution.

i) S. aureus

iii) E. coli

Q2) Attempt any two.

a) Describe the process of municipal water purification and explain its significance.

b) What is food preservation? Explain in brief food preservation by Heat, high temperature, Chemicals and Radiations.

c) Define milk? Explain routine bacteriological examination of milk.

1201

Q3) Write short notes (any four):

a) Pasteurization of milk

b) MPN test

c) Spoilage of fruits.

d) Germ free life and Gnotobiotic life.

e) Eijkman test

f) Standard plate count

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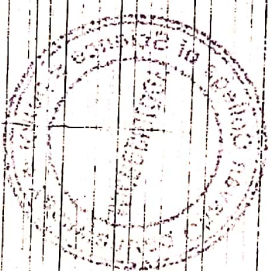
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B.Sc. (Part-I) (Semester - II) Examination, May -2019

MICROBIOLOGY

DSC-25B: Bacteriology (Paper-III)

Sub. Code : 72849

Day and Date : Saturday, 11 - 05 - 2019

Time : 3.00 p.m. to 5.00 p.m.

Total No. of Pages : 2

ST-831

Total Marks : 50

Instructions : 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw neat labeled diagrams wherever necessary.

Q1) Select the correct alternative from the following.

[10]

- a) _____ is a unique component of bacterial cell wall.
 - i) Peptidoglycan
 - ii) Protein
 - iii) Polysaccharide
 - iv) Lipid
- b) A single flagellum at one end of the cell is called _____ trichous arrangement.
 - i) Mono
 - ii) Lopho
 - iii) Amphi
 - iv) Peri
- c) _____ are the sites for protein synthesis.
 - i) Liposomes
 - ii) Ribosomes
 - iii) Endospores
 - iv) Mesosomes
- d) Bacterial capsules contain about _____ % organic compounds.
 - i) 50
 - ii) 02
 - iii) 10
 - iv) 98
- e) Mesosomes are the invaginations of _____
 - i) cell wall
 - ii) cell membrane
 - iii) ribosome
 - iv) capsule

Q2) Attempt any two of the following

[20]

- i) Acid produced in Sorbitol-Menthionine test is detected by using _____
 - i) Durham's tube
 - ii) Andrade's indicator
 - iii) Lead acetate
 - iv) Iodine
- ii) H₂S production by microorganisms is detected by using _____
 - i) Andrade's indicator
 - ii) Durham's tube
 - iii) lead acetate
 - iv) Iodine
- iii) The mineral oil used in stock culture maintenance is _____ oil.
 - i) paraffin
 - ii) cedar wood
 - iii) corn
 - iv) vegetable
- iv) _____ is used as a reducing agent in anaerobic media.
 - i) Na chloride
 - ii) Na taurocholate
 - iii) Na thioglycolate
 - iv) Na citrate
- v) _____ agar medium is used to detect amylase activity.
 - i) Nutrient
 - ii) Starch
 - iii) Milk
 - iv) MacConkey's

Q3) Attempt any four of the following.

[20]

- a) Describe the structure and functions of Pili.
- b) Explain with diagram-Gas pack anaerobic jar.
- c) Discuss the structure and functions of Capsule.
- d) Describe the structure of Endospore with a labeled diagram.
- e) Explain with diagram-Anaerobic glove box.
- f) Describe various stages of Spontulation.



ST-831

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Total No. of Pages : 2

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B.Sc. (Part-I) (Semester-II) (Revised)
Examination, May-2019
MICROBIOLOGY
Applied Microbiology (Paper - IV)
Sub. Code : 59688

Day and Date : Monday, 13 - 05 - 2019
Time : 3.00 pm. to 5.00 pm.

Total Marks : 50

- Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.
3) Draw neat diagram wherever necessary.

Q1) Rewrite the following sentences by selecting the correct answer from the given alternatives. [10]

- a) Vinegar contains _____ acid.
i) Lactic ii) Citric
iii) Acetic iv) Butyric
- b) _____ is a perishable food.
i) Milk ii) Sugar
iii) Cereals iv) Potato
- c) Anaerobic degradation of carbohydrates is called as _____.
i) Lipolysis ii) Putrefaction
iii) Fermentation iv) Oxidation
- d) _____ acid is produced during curd formation.
i) Pyruvic ii) Acetic
iii) Lactic iv) Citric
- e) _____ is a main protein present in the milk.
i) Albumin ii) Casein
iii) Gelatin iv) Globulin

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ST-69

- f) _____ is an indicator of faecal pollution of water.
i) *E. coli* ii) *B. megaterium*
iii) *B. subtilis* iv) *S. aureus*
- g) VP test is used to detect _____ production.
i) Acid ii) Ammonia
iii) Indole iv) Acetylmethylcarbinol
- h) The medium used to detect indole production is _____.
i) Koser's citrate ii) Peptone water
iii) Lactose broth iv) GPB
- i) Majority of respiratory infections are transmitted through _____.
i) Water ii) Sewage
iii) Milk iv) Air
- j) _____ are expelled out from the mouth.
i) Droplets ii) Droplet nuclei
iii) Infectious dust iv) Dust particles

Q2) Attempt any two of the following. [20]

- a) Give composition of milk and describe in detail various sources of microorganisms in milk.
- b) Describe in detail municipal water purification process and explain its significance.
- c) Describe in detail enumeration of microorganisms in air by liquid impingement method.

Q3) Write short notes on any four. [20]

- a) Microbial spoilage of fruits
- b) Enlist the methods used for food preservation
- c) Principle and process of phosphatase test
- d) Indicators of faecal pollution of water
- e) Droplets and droplet nuclei
- f) Chemical preservatives in food preservation

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