

Yashwantrao Chavan College of Science, Karad.

B.Sc. Part II Semester- III

Paper- V (Animal diversity of Vertebrates)

Question Bank –

Multiple choice questions

1. What is the largest group of vertebrates?
a. Mammals b. Fish c. Reptiles d. Birds
2. Which class of vertebrates includes animals with feathers?
a. Mammals b. Reptiles c. Birds d. Amphibians
3. Hagfish and lampreys belong to which group of vertebrates?
a. Fish b. Amphibians c. Reptiles d. Mammals
4. Which of the following is a characteristic of all vertebrates?
a. Endoskeleton b. Exoskeleton c. No skeleton d. Hydrostatic skeleton
5. Birds are characterized by:
a. Scales b. Hair c. Feathers d. Fur
6. Which vertebrate group is cold-blooded and lays eggs with leathery shells?
a. Mammals b. Birds c. Amphibians d. Reptiles
7. Which class of vertebrates includes animals with a three-chambered heart?
a. Fish b. Amphibians c. Birds d. Mammals
8. The ability to regulate body temperature internally is known as:
a. Endothermy b. Ectothermy c. Poikilothermy d. Thermoregulation
9. Which of the following vertebrates have mammary glands?
a. Amphibians b. Reptiles c. Mammals d. Birds
10. The only flying mammals are:
a. Bats b. Birds c. Flying squirrels d. Pterosaurs
11. Cartilaginous fish, such as sharks and rays, belong to which class?
a. Osteichthyes b. Chondrichthyes c. Amphibia d. Aves

12. The process by which amphibians breathe through their skin is called:
 - a. Respiration
 - b. Cutaneous respiration
 - c. Gills
 - d. Pulmonary ventilation
13. Which of the following is a characteristic of mammals?
 - a. Cold-blooded
 - b. Lay eggs
 - c. Mammary glands
 - d. Scales
14. In which group of vertebrates do fertilization and development occur internally?
 - a. Fish
 - b. Amphibians
 - c. Reptiles
 - d. Mammals
15. The ability to lose and regrow limbs is a characteristic of some:
 - a. Fish
 - b. Amphibians
 - c. Reptiles
 - d. Mammals
16. Which of the following is a marsupial?
 - a. Kangaroo
 - b. Elephant
 - c. Lion
 - d. Giraffe
17. In which class do organisms have a waterproof skin and lay amniotic eggs?
 - a. Amphibians
 - b. Reptiles
 - c. Mammals
 - d. Birds
18. What is the primary function of the placenta in mammals?
 - a. Oxygen exchange
 - b. Nutrient exchange
 - c. Waste elimination
 - d. All of the above
19. Which of the following is a monotreme?
 - a. Platypus
 - b. Kangaroo
 - c. Koala
 - d. Tasmanian devil
20. The Jacobson's organ, used for chemoreception, is prominent in which group of vertebrates?
 - a. Snakes
 - b. Birds
 - c. Frogs
 - d. Fish
21. Which class of vertebrates has a bony skeleton and a swim bladder?
 - a. Amphibians
 - b. Fish
 - c. Reptiles
 - d. Mammals
22. The process of shedding and replacing skin in reptiles is called:
 - a. Molting
 - b. Shredding
 - c. Shedding
 - d. Moulting
23. Which of the following is not a group of reptiles?
 - a. Lizards
 - b. Crocodiles
 - c. Penguins
 - d. Turtles
24. Which of the following is not a type of mammalian teeth?
 - a. Incisor
 - b. Molar
 - c. Gular
 - d. Canine
25. The order Carnivora includes animals that are primarily:
 - a. Herbivores
 - b. Insectivores
 - c. Carnivores
 - d. Omnivores
26. The organ that produces insulin in mammals is the:
 - a. Liver
 - b. Kidney
 - c. Pancreas
 - d. Stomach

27. Which of the following is a characteristic of birds but not of mammals?
- Mammary glands
 - Feathers
 - Warm-blooded
 - Viviparity
28. The fused bones in a bird's skeleton, providing strength for flight, are called:
- Cartilage
 - Ossicles
 - Pectoral girdle
 - Pygostyle
29. The term "marsupium" refers to:
- A pouch in which marsupials carry their young
 - The mating dance of birds
 - The nest of reptiles
 - The respiratory system of amphibians
30. The largest group of fish, characterized by a bony skeleton, is known as:
- Cartilaginous fish
 - Jawless fish
 - Bony fish
 - Ray-finned fish
31. The swim bladder in fish helps with:
- Buoyancy
 - Digestion
 - Respiration
 - Locomotion
32. Which of the following is a limbless, elongated reptile?
- Gecko
 - Turtle
 - Snake
 - Iguana
33. The class Aves includes animals that have:
- Scales
 - Fur
 - Feathers
 - Exoskeletons
34. What is the primary function of gills in fish?
- Breathing
 - Smelling
 - Hearing
 - Tasting
35. The process of transformation from a larval stage to an adult in amphibians is known as:
- Metamorphosis
 - Molt
 - Maturation
 - Adaptation
36. The specialized light-sensitive organ in some fish that helps in detecting prey in low-light conditions is called:
- Lateral line
 - Ampullae of Lorenzini
 - Swim bladder
 - Electroreceptors
37. Which of the following is a feature of both birds and mammals?
- Lay eggs
 - Warm-blooded
 - Scales
 - External fertilization
38. The group of mammals that includes kangaroos and koalas is known as:
- Rodents
 - Marsupials
 - Monotremes
 - Placentals
39. Which group of vertebrates includes animals with a unique feature called the notochord?
- Fish
 - Amphibians
 - Reptiles
 - Chordates

40. The group of reptiles that includes turtles, tortoises, and terrapins is called:
a. Squamata b. Testudines c. Crocodilia d. Sphenodontia
41. Which of the following is a method of reproduction common in reptiles, where eggs are laid outside the body and develop independently?
a. Viviparity b. Oviparity c. Ovoviviparity d. Internal fertilization

Long answer question

- 1) Give the salient features of the class mammalia and state its different orders with examples.
- 2) Explain the key features of cartilaginous fish in the class Chondrichthyes
- 3) Describe the role of cartilage in the skeletons of chondrichthyan fish
- 4) Describe the characteristics of bony fish in the class Osteichthyes.
- 5) Explain the key characteristics of amphibians and their transition from aquatic to terrestrial life.
- 6) Describe the features of reptiles in the class Reptilia,
- 7) Describe the characteristics of birds in the class Aves, including adaptations for flight.
- 8) Discuss the key features of mammals in the class Mammalia, including hair, mammary glands, and a four-chambered heart.
- 9) Describe the diversity of mammalian orders, such as rodents, primates, carnivores, and ungulates.
- 10) How do jawless fish in the class Agnatha differ from other vertebrates in terms of jaw structure and feeding mechanisms?
- 11) Describe the life cycle of a typical jawless fish, including larval stages and metamorphosis.
- 12) Give an account of general characters of class cephalochordate and classify it up to subclasses with giving examples.
- 13) Give an account of salient feature of super class Pisces.

- 14) What are the key characteristics that define bony fish in the class Osteichthyes, and how do they differ from cartilaginous fish?
- 15) Give an account of general characters of class urochordate and classify it up to order with giving examples.
- 16) Give the general characters of class Aves and explain the order Archaeopterygiformes.
- 17) Describe the mechanism of respiration in Scolidon.
- 18) Give an account of salient features of class Amphibia and add a note on order anura.
- 19) Give an account on the distinguishing characters of venomous and non- venomous snakes.
- 20) Give the salient features of the class mammalia and state its different orders with examples.

Short answer question

1. What is the defining characteristic of jawless fish?
2. How do lampreys feed?
3. Write a note on Agnatha.
4. General characters of class Ascidiacea.
5. Salient feature of Myxine.
6. General characters of class Thaliacea.
7. Salient feature of group Ostracodermi.

8. What are the key features of bony fish?.
9. Name an example of a ray-finned fish.
10. What is the economic significance of bony fish in fisheries?
11. What are the characteristics of jawless fish in the class Agnatha?
12. Provide an example of a jawless fish.
13. How do jawless fish feed?
14. Write a note on Primates
15. Salient feature of Mammals
16. Write a note on order Carnivora
17. Write note on Anura
18. Write note on Apoda

19. Distinguish between cartilaginous & bony fish
20. What is the importance of lampreys in aquatic ecosystems?
21. General characters of class Leptocardi
22. Salient features of Osteichthyes
23. Key for identification of snakes.
24. Snake biting mechanism.
25. Chelonia.
26. Write a note on parental care in Midwife toad.
27. Squamata.
28. Holobranch of Labeo
29. Gill structure of Labeo
30. Name three orders of amphibians.
31. First aid treatment after snake bite.
32. General characteristics of Aves
33. Digestive glands of birds
34. Sub-class- Archaeornithes
35. Write a note on Insectivorous Mammals
36. What are the key characteristics of chondrichthyan fish?
37. Give an example of a cartilaginous fish.
38. What are the characteristics of chondrichthyan fish?
39. Give an example of a cartilaginous fish.

Seat No.	
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**B.Sc (part-II) (Semester-I) (NEP) Examination
Oct./Nov. 2023.
Yashwantrao Chavan College of Science, Karad.
Subject-Zoology (Paper-V)
Subject code-91569**

Day and Date: Saturday, 25/11/2023.

Period-2H.

Total marks[40]

Time-10.30am to 12.30pm.

Total pages

Q.1 Answer the following questions choosing the correct alternatives given below them.

8

1) Protochordates includes.....

- a) Urochordata and Cephalochordata b) Cephalochordata and Birds
c) Urochordata and pisces d) Urochordata and Snakes

2) The term Agnatha means.....

- a) Presence of one jaw b) Presence of two jaws
c) Absence of jaws d) Presence of Teeth in jaws

3) One of the following fish has an electric organ

- a) Scoliodon b) Hammer headed shark
c) Torpedo d) Trygon

4) Heart of frog ischambered

- a) One b) Two c) Three d) Four

5) The venom of cobra is.....

- a) Neurotoxin b) Haemotoxin
c) Both neuro and haemotoxin d) Gastrotoxin

6) Egg laying mammals are.....

- a) Prototherians
- b) Eutherians
- c) Marsupials
- d) Metatherians

7) Bidder's canal is found in.....

- a) Kidney of male frog
- b) Testis of male frog
- c) Liver of frog
- d) Ovary of frog

8) In frog pyloric sphincter is found between.....

- a) Stomach and duodenum
- b) Fundus and Pylorus
- c) Oesophagus and Pharynx
- d) Cardiac and Fundus

Q.2 Write Long answer (Any Two)

16

- 1) Explain frog digestive system in detail.
- 2) Give the salient features of class mammalia and state its different orders with examples.
- 3) Give salient features of group cyclostomata and the salient features of its classes, giving examples.
- 4) What is excretion? Describe the excretory system of frog.

Q.3 Write Short Notes on (Any Four)

16

- 1) Blood cells of frog
- 2) First aid treatment after snake bite
- 3) Truncus arteriosus
- 4) Characteristics of birds
- 5) Give general characters of Sub-phylum Cephalochordata
- 6) Give general character of class Pisces

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**B.Sc (part-II) (Semester-III) (CBCS) Examination
Oct./Nov. 2023.
Yashwantrao Chavan College of Science, Karad.
Subject-Zoology (Paper-V)
Subject code-73304**

**Day and Date: Saturday, 25/11/2023.
Time-10.30am to 12.30pm**

**Total marks:50
Period:2 Hr
Total pages:1**

Q.1 Answer the following questions choosing the correct alternatives given below them. 10

1.The venom of cobra is.....

- | | |
|------------------------------|----------------|
| a. Neurotoxin | b. Haemotoxin |
| c. Both neuro and haemotoxin | d. Gastrotoxin |

2.Development is indirect in.....

- | | | | |
|----------|----------|--------|-------------|
| a. Snake | b.Turtle | c.Toad | d.Crocodile |
|----------|----------|--------|-------------|

3.Inin only one ovary is present.

- | | | | |
|------------|------------|------------|--------|
| a.Reptilia | b.Amphibia | c.Mammalia | d.Aves |
|------------|------------|------------|--------|

4.The term Agnatha means.....

- | | |
|------------------------|------------------------------|
| a. Presence of one jaw | b. Presence of two jaws |
| c. Absence of jaws | d. Presence of Teeth in jaws |

5.The adult are mostly parasitic and scavengers in.....

- | | | | |
|---------------|-----------------|--------------------|------------------|
| a.Urochordata | b. Cyclostomata | c. Cephalochordata | d. Protochordata |
|---------------|-----------------|--------------------|------------------|

6. Amphioxus obtain food by.....

- | | | | |
|--------------|--------------|-----------------------|------------------------|
| a. Predation | b.Scavenging | c. Biting and chewing | d. Ciliary filter feed |
|--------------|--------------|-----------------------|------------------------|

7. Sclerotic plates are present in the eyes of.....

- a. Amphibians b. Aves c. Reptiles d. Mammals

8. The circulatory system of human is also called as.....

- a. Cardiovascular system b. Arterial system c. Venous system d. Portal system

9. Protochordates includes.....

- a. Urochordata and Cephalochordata b. Cephalochordata and Birds
c. Urochordata and pisces d. Urochordata and Snakes

10. Lungs with air sacs are seen in.....

- a. Cobra b. Whale c. Pigeon d. Bat

Q.2 Write Long answer (Any Two)

20

1. Give an account of respiratory system of birds.
2. Give salient features of group cyclostomata and the salient features of its classes, giving examples
3. Give the salient features of Class Amphibia and mention its sub-classes.
4. Give an account of digestive system of birds.

Q.3 Write Short Notes on (Any Four)

20

1. Key for identification of snakes.
2. Salient features of mammals.
3. Write a note on Apoda.
4. Classify Petromyzon giving reason.
5. Characteristics of birds.
6. Sketch and label T.S of gill of Labeo.

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- 1) Blood cells of frog
- 2) First aid treatment after snake bite
- 3) Truncus arteriosus
- 4) Characteristics of birds

5) Give general characters of Sub-phylum Cephalochordata

6) Give general character of class Pisces

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**B.Sc (part-II) (Semester-III) (NEP) Examination
Oct./Nov. 2023.**

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Subject code-91569**

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Marks:40
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3)An operculum is present in.....

a) Trygon

b) Rohu

c) Torpedo

d) Scoliodon

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6) Exoskeleton of consists of scales , scutes or bony plates

- a) Reptiles b) Birds c) Mammals d) Fishes

7) In frog pyloric sphincter is found between.....

- a) Stomach and duodenum b) Fundus and Pyrolus
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8) Sclerotic plates are present in the eyes of.....

- a) Amphibians b) Aves c) Reptiles d) Mammals

Q.2 Write Long answer (Any Two)

16

- 1) What is excretion? Describe the excretory system of frog.
- 2) Give the general character of class Aves and describe in the detail sub-class Archaeornithes.
- 3) Explain frog digestive system in detail.
- 4) Give an account on the distinguishing character of venomous and non-venomous snakes.

Q.3 Write Short Notes on (Any Four)

16

- 1) Truncus arteriosus.
- 2) Give general character of class Pisces.
- 3) Snake biting mechanism.
- 4) Write a note on Agnatha.
- 5) Blood cells of frog.

6) Give general characters of sub-phylum Urochordata.

Seat No.	
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