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M.Sc. (Third Semester)
EXAMINATION, Dec. - Jan., 2021-22
(ZOOLOGY)
Paper First
(Comparative Anatomy of Vertebrates)

Time : Three Hours]

[Maximum Marks :80

[Minimum Marks :16

Section - A

(Multiple choice questions)

(1 Mark each)

Note: Attempt all questions.

Choose the correct answer:

1. Perching mechanism is found in :
(A) Birds
(B) Mammals
(C) Fish
(D) Amsphibia
2. Echidna is :
(A) Egg laying Reptiles
(B) Egg laying Amphibians
(C) Egg laying mammals
(D) All the above

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3. Apoda means
(A) legless Amphibians
(B) legless Reptiles
(C) Legless mammals
(D) None of the above
4. Scoliodon is :
(A) Lung fish
(B) Bony fish
(C) Cartilagenous fish
(D) All the above
5. Archeopteryx is connecting link between:
(A) Fish and Amphibia
(B) Fish ad Reptiles
(C) Amphibia and Reptiles
(D) Reptiles and birds
6. Humerus is :
(A) Bone of axial skeleton
(B) Bone of fore limb
(C) bone of hind limb
(D) All of the above
7. Pelvic Girdle is associated with
(A) Fore limb
(B) Hind limb
(C) (A) and (B) both
(D) None of the above

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8. Which of the following vertebrae joints with skull:
- (A) Atlas
 - (B) Axis
 - (C) Lumber
 - (D) Typical
9. Pygostyle bone is found in
- (A) Fish
 - (B) Amphibia
 - (C) Reptiles
 - (D) Birds.
10. Mammalian hair is:
- (A) Epidermal
 - (B) Mesodermal
 - (C) Endodermal
 - (D) All of the above
11. Fish heart have
- (A) Two chambers
 - (B) Four chamber
 - (C) (A) and (B) both
 - (D) none of the above
12. The impure blood received in frog
- (A) Right auricle
 - (B) Left auricle
 - (C) Ventricle
 - (D) None of the above

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13. During respiration in aves gas exchange occurs in :
- (A) Air Sacs
 - (B) Lungs
 - (C) (A) and (B) both
 - (D) None of the above
14. O_2 molecule binds with
- (A) WBCs
 - (B) Platelets
 - (C) RBCs
 - (D) None of the above
15. Lymphocytes and Phagocytes are :
- (A) Erythrocytes
 - (B) Leucocytes
 - (C) Platelets
 - (D) All of the above
16. The impulses are transmitted to the central nervous system through :
- (A) Sensory nerves
 - (B) Motor nerves
 - (C) Both (A) and (B)
 - (D) None of the above

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17. Brain and spinal cord is part of
- (A) Central nervous system
 - (B) Peripheral nervous system
 - (C) Sympathetic Nervous system
 - (D) None of them
18. Functional unit of kidney is :
- (A) Medulla
 - (B) Hilum
 - (C) Neurons
 - (D) Nephrons
19. In which animal only one ovary is found :
- (A) Scoliodon
 - (B) Rana
 - (C) Rabbit
 - (D) Pigeon
20. Vasa deferens is a part of :
- (A) Female reproductive system
 - (B) Male reproductive system
 - (C) (A) and (B) both
 - (D) None of the above

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Section - B

(2 Marks each)

(Very Short Answer type questions)

Note: Attempt Questions of this Section in 2-3 Sentences.

1. Write three basic characters of the chordate.
2. What are the differences between Agnatha and Gnathostomata?
3. What are the functions of claw?
4. Draw a well label diagram of pectoral girdle of mammal (Description is not required)
5. Write any two functions of RBCs and WBCs.
6. Describe the ventricle chamber of fish.
7. What is the basic function of sensory receptors.
8. Write the function of Pecten.

Section - C

(3 Marks each)

(Short answer type questions)

Note: Attempt the questions of this section in 75 words.

1. Write difference between amphibia and Reptiles.
2. Write adaptive characters of aves?
3. Write the functions of integuments
4. Draw a well label diagram of pelvic girdle of frog. (Description is not required)"
5. Write any three characters of heart that shows comparative study of fish, reptiles and Mammals.

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6. Draw a well label diagram of lung of uromastix (Description is not required).
7. Write the name of cranial nerves found in scoliodon.
8. Draw a well label diagram of male urinogeuital organs of pigeon.

Section - D

(Long Answer Type Questions)

(5 Marks each)

Note: Attempt the questions of this section in 75 words.

1. Write the general characteristics of class mammalia

Or

How Amphibians are originated.

2. Describe the structure of scales found in fish with well label diagram.

Or

Draw a well label diagramm of v.s. of skin of rabbit (Description is not required)

3. Describe the structure and functions of airsacs with well label diagram.

Or

Draw a well label diagram of L.S. of heart of forg (Description is not required)

4. Explain the structure and function of internal car of scoliodon.

Or

Draw a well label diagram of brain of fish and Mammal. (Description is not required)