

2020
ZOOLOGY
(HONOURS)
Paper : II
[OLD SYLLABUS]

Full Marks : 75

Time : 4 Hours

*The figures in the right-hand margin indicate marks.**Candidates are required to give their answers in their own words as far as practicable.*

1. Answer any **five** questions: 1×5=5
- a) What are gyri and sulci?
 - b) Which type of horn found in *Rhinoceros*?
 - c) Mention any two fundamental chordate characters.
 - d) What is foramen of Panizza?
 - e) What is stomochord?
 - f) What is meant by 'Tunicata'?
 - g) Write the scientific name of an egg-laying mammal.

2. Answer any **six** questions: 2×6=12
- a) Define parental care with example.
 - b) Distinguish between remiges and rectrices.
 - c) Why metamorphosis in *Ascidia* is called retrogressive?
 - d) Write the functions of electric organ in fish.
 - e) Write the scientific names of any two genera of lung fishes and mention their distribution.
 - f) What is the function of pulmonary vein in *Bufo* sp.?
 - g) State the advantages of ruminant stomach in cud-chewing mammals.
 - h) Name the major flight muscles of bird.
 - i) Distinguish between ductus caroticus and ductus arteriosus.
 - j) State the differences between Petromyzontia and Myxinoidea.
3. Answer any **three** questions: 6×3=18
- a) Give a comparative account of heart in amniotes. 6
 - b) Give an account of circulatory system of Pigeon with a suitable diagram. 4+2

- c) Give an account of the excretory system of *Branchiostoma* with suitable diagram. 4+2
- d) State the anatomical peculiarities of *Petromyzon*. Add a note on significance of Ammocoetes larva in determining phylogenetic position of *Petromyzon*. 4+2
- e) Mention the salient features of class Amphibia. Classify Amphibia upto order with examples. Mention two characters of each of any two living orders. 2+2+2
4. Answer any **four** questions: 10×4=40
- a) State the salient features of class Reptilia. Distinguish between order Chelonia and Crocodilia. Discuss the biting mechanism of snake with suitable diagram. 2+2+(4+2)
- b) Compare the feeding structures of *Ascidia* and *Branchiostoma*. Distinguish between Chondrichthyes and Osteichthyes. Mention the anatomical peculiarities of Dipnoi. 4+2+4

- c) Write short notes on: 5+5
- i) Integumentary glands in mammals
- ii) Nesting with special reference to Axolotl.
- d) Draw a labelled diagram of air sacs in Pigeon. State the functions of air sacs. Explain perching mechanism in birds. (2+2)+2+4
- e) Give an account of comparative anatomy of kidney in amniotes. Add a note on Portal system. 6+4
- f) Describe the anatomical peculiarities of *Sphenodon*. Comment on its phylogenetic position. 5+5