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**3 (Sem-4/CBCS) ZOO HC 1**

**2023**

**ZOOLOGY**

(Honours Core)

Paper : ZOO-HC-4016

**(Comparative Anatomy of Vertebrates)**

Full Marks : 60

Time : Three hours

***The figures in the margin indicate full marks for the questions.***

1. Choose the correct answer :  $1 \times 7 = 7$
- (a) Ampullae of Lorenzini are found in-
- (i) the tadpoles of frog
  - (ii) the warts in the skin of toad
  - (iii) the internal ear of fish
  - (iv) under the skin of sharks

Contd.

- (b) Sweat glands are found in-
- whales and sea cows
  - only in whales
  - only in sea cows
  - None of the above
- (c) Furcula is a part of
- pectoral girdle of Varanus
  - pectoral girdle of fowl
  - scapula of rabbit
  - None of the above
- (d) Fangs of a poisonous snake are placed on the
- Maxillae
  - Premaxillae
  - Vomers
  - Dentaries
- (e) A "chewing stomach" (gizzard) is not found in
- Hen
  - Vulture
  - Parrot
  - Sparrow

- (f) Hypophysis develops from
- Rathke's pocket
  - Vermiform appendix
  - Parotid glands
  - Endostyle
- (g) Uropygial glands are found
- in all birds
  - in all aquatic animals
  - only in aquatic birds
  - only in pigeons

2. Answer the following questions :  $2 \times 4 = 8$
- Write a brief note on scent glands.
  - What are the different types of feathers found in birds ?
  - What is Foramen magnum? Mention its function.  $1 + 1 = 2$
  - What are neuromast organs? How do they function ?  $1 + 1 = 2$
3. Answer the following questions : **(any three)**  
 $5 \times 3 = 15$
- What are receptors? Write a brief note on different types of receptors.  $1 + 4 = 5$
  - Describe the different types of skeleton in vertebrates.
  - Give an account of the dentition in mammals.

- (d) Describe the structure and functions of accessory respiratory organs in fishes.
- (e) Explain the derivatives of skin in different group of chordates with suitable diagram.
4. (a) Give an account of the integument in vertebrates with suitable diagram and explain its function.  $8+2=10$

**Or**

- (b) Write a comparative account of the alimentary canal of a birds and a mammal and state how these are adapted to their respective feeding habits.  $5+5=10$
5. (a) Give a comparative account of brain and cranial nerves in mammals. 10

**Or**

- (b) Describe briefly the comparative account of different types of lungs in vertebrates.
6. (a) Define aortic arches. Discuss the modification of aortic arches in different groups of vertebrates.  $2+8=10$

**Or**

- (b) Describe a comparative account of the structure of kidney in the vertebrates with neat labelled diagram. 10
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