This question paper contains 3 printed pages]

Roll No. | | | | | | | | | | | |

S. No. of Question Paper : **2373**

Unique Paper Code : **2231402** **F-4**

Name of the Paper : **Comparative Anatomy of Vertebrates**

Name of the Course : **B.Sc. (Hons.) Zoology**

Semester : **IV**

Duration : **3 Hours** Maximum Marks : **75**

(Write your Roll No. on the top immediately on receipt of this question paper.)

Attempt *five* questions in all, including Question No. **1**.

1. (*a*) Define the following terms : 5

(*i*) Solenocytes

(*ii*) Holobranch gill

(*iii*) Carnassial tooth

(*iv*) Plastron

(*v*) Meninges

(*b*) Differentiate between the following : 10

(*i*) Monocondylic and Dicondylic skull

(*ii*) Polyphyodont and Diphyodont dentition

(*iii*) Ductus Caroticus and Ductus Botalli

(*iv*) Meibomian and Ceruminous gland

(*v*) True horns and Antlers.

P.T.O.

(*c*) Give the Location of the following : 7

(*i*) Acetabulum

(*ii*) Scroll valve

(*iii*) Iter

(*iv*) Vibrissae

(*v*) Eustachian tube

(*vi*) Paccinian corpuscles

(*vii*) Red gland

(*d*) Fill in the blanks : 5

(*i*) Fluid present in the cavities of the brain is known as ..... .

(*ii*) Fused caudal vertebra in birds is ..... .

(*iii*) Functional unit of nervous system is ..... .

(*iv*) Poison glands of snakes are modified ..... .

(*v*) Glandular part of stomach of bird is known as ..... .

2. Trace the evolution of heart in various groups of vertebrates with the help of diagrams. 12

3. Explain the succession of kidney in vertebrates. Support your answer with well-labelled diagrams. 12

4. (*a*) Discuss the fate of 1st and 2nd visceral arches in vertebrates. 8

(*b*) Justify the statement that integument is "Jack of All trades". 4

5. (*a*) Briefly describe the structure and functions of air sacs in birds. 6

(*b*) Describe respiration in Amphibia. 6

6. (*a*) What are receptors ? Classify them with suitable examples. 6

(*b*) What are the various types of uteri in mammals ? 6

7. Write short notes on any *three* of the following : 3×4

(*i*) Types of feathers

(*ii*) Cranial nerves in mammals

(*iii*) Ruminant stomach

(*iv*) Types of centrum.