

[This question paper contains 4 printed pages.]

Sr. No. of Question Paper : 2079

GC-3

Your Roll No.....

Unique Paper Code : 32231301

Name of the Paper : Diversity of Chordates

Name of the Course : **B.Sc. (H) (Zoology, CBCS Scheme)**

Semester : III

Duration : 3 Hours

Maximum Marks : 75

Instructions for Candidates

1. Write your Roll No. on the top immediately on the receipt of this question paper.
2. Attempt **five** questions in all including Question No. 1 which is compulsory.
3. All the parts of a question must be attempted together.

1. (a) Define the followings : (1×5)

(i) Brood parasitism

(ii) Wheel organs

(iii) Living fossil

(iv) Solenoglyphous

(v) Rectal gland

- (b) Give the scientific names and classify the following animals upto order : (2×5)

(i) Lancelet

P.T.O.

(ii) Cobra

(iii) Saw fish

(iv) Shrew

(v) Parrot

(c) Differentiate between the following :

(2×4)

(i) Stenohaline and Euryhaline

(ii) Eutheria and Metatheria

(iii) Tomaria and Tadpole larvae

(iv) Rectrices and Remiges

(d) Name the zoogeographical regions to which following animals belong to :

(½×4)

(i) Gila Monster

(ii) *Protopterus*

(iii) Toucan

(iv) Humming bird

(e) State whether the following statements are true or false :

(½×4)

(i) Lemur are confined to Ethiopian region.

(ii) Earliest tetrapods are evolved from crossopterygian fishes.

(iii) Raptorial feet are adapted for running.

- (iv) Trimethylamine oxide (TMAO) stabilize proteins against denaturing effect of urea in elasmobranch.
2. (a) Describe various modes of parental care in amphibians with suitable examples.
- (b) State the advanced features of vertebrates over protochordates. (8,4)
3. (a) Give an account of general characters of cyclostomes.
- (b) Describe various larval forms in protochordates. Add a note on retrogressive metamorphosis. (3,9)
4. (a) 'Eel is an epic example of migration' justify the statement. Add a note on life-history of eel.
- (b) Give an account of *Archaeopteryx* and its affinities. (8,4)
5. (a) Describe the theories concerning the distribution of animals.
- (b) Compare the mammalian fauna of the Ethiopian and Oriental region. (8,4)
6. (a) Explain the mode of osmoregulation in elasmobranchs.
- (b) Briefly explain the aerodynamics of flight in birds and describe various modes of flight. (4,8)
7. Write short notes on any **three** of the following : (4×3)
- (i) Echinoderm theory of chordate origin

(ii) Protheria

(iii) Affinities of *Sphenodon*

(iv) Biting mechanism in snakes