[This question paper contains 4 printed pages.]

Your Roll No.....

Sr. No. of Question Paper : 1088 **I**

Unique Paper Code : 2232012301

Name of the Paper : Diversity of Chordates

Name of the Course : **B.Sc. (H) Zoology NEP-UGCF**

Semester : III

Duration : 2 Hours Maximum Marks : 60

Instructions for Candidates

1. Write your Roll No. on the top immediately on receipt of this question paper.
2. Answer **four** questions in all.
3. Question No. **1** is compulsory.
4. Draw well labelled diagram wherever needed.

1. (a) Define the following terms **(any three)** : (3)

(i) Operculum

P.T.O.

(ii) Preen gland

(iii) Diastema

(iv) Stomochord

(v) Opisthoglyphous fangs

(b) Differentiate between the following terms (**any two**) : (4)

(i) Physostomous and Physoclistous swim bladder.

(ii) Tornaria and Tadpole larvae.

(iii) Altricious and precocious birds.

(c) Give the function of the following (**any four**) :(4)

(i) Nuptial pads

(ii) Buccal funnel

(iii) Jacobson organ

(iv) Keel

(v) Crop

(vi) Weberian ossicle

(d) Give the scientific names and classify upto order **(any two)** : (4)

(i) Australian Lung fish

(ii) Hagfish

(iii) Duck billed platypus

(iv) Flying lizard

2. (a) Compare and discuss the characteristics of modern-day living agnathans. (8)

(b) Describe osmoregulation by teleost fishes in sea and freshwater? How does shark maintain their osmoregulation? (7)

3. (a) Explain various characteristic features which help bird to adapt to aerial mode of life. (8)

(b) A classic example of adaptive radiations can be seen in mammalian locomotory appendages. Explain with examples. (7)

4. (a) Give an elaborative account of parental care in amphibians. (9)

(b) Explain plate tectonic theory and comment on the fauna of Australian realm. (6)

5. (a) Write a detailed note on origin of Tetrapods. (7)

(b) Briefly explain the poison apparatus and biting mechanism in snakes. (8)

6. Write short notes on any **three** of the following : (15)

(i) Wallace and Weber line

(ii) Origin of chordates

(iii) Retrogressive metamorphosis

(iv) *Sphenodon*