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S. No. of Question Paper : 7513

Unique Paper Code : 32231301

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Name of the Paper : Diversity of Chordates

Name of the Course : B.Sc. (Honours) Zoology

Semester : III

Duration : 3 Hours

Maximum Marks : 75

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

Answer five questions in all, including

Question No. 1 which is compulsory.

Draw labelled diagrams wherever necessary.

1. (a) Define the following terms :

4

(i) Retrogressive metamorphosis

(ii) Osmoregulation

(iii) Endemic species

(iv) Fossorial Adaptations.

P.T.O.

(b) Give the scientific name and classify the following upto
Orders : 10

(i) Rat fish

(ii) Glass snake

(iii) Acorn worm

(iv) Mongoose

(v) Mud Puppy.

(c) Differentiate between the following terms : 8

(i) Lacertilia and Ophidia

(ii) Euryhaline and Stenohaline

(iii) Carinatae and Ratitae

(iv) Wallace's line and Weber's line.

(d) Match the following animals with the Zoogeographical
region : 3

(i) Two-horned Rhinoceros (a) Oriental

(ii) Orangutan (b) Ethiopian

(iii) Bison (c) Neotropical

(iv) Koala bear (d) Nearctic

(v) Llama (e) Palearctic

(vi) Mole rat (f) Australian

(e) State whether the following statements are true or
false : 2

(i) Eyelids of snakes are movable.

(ii) Perissodactyles have an even number of digits.

(iii) In frogs and toads teeth are present in both upper
and lower jaws.

(iv) Duck-billed Platypus is endemic to Australian
realm.

2. (a) "Hemichordates are non-chordates". Justify the
statement.

(b) Discuss the Echinoderm theory for the origin of
Chordates. 6,6

3. (a) Enumerate the various structural adaptations in birds
related to their aerial mode of life.

(b) How do fresh water fishes osmoregulate ? 8,4

4. (a) Discuss the theories of distribution of animals.

(b) Give an account of the mammalian fauna of the Ethiopian
realm. 8,4

5. (a) Describe the poison apparatus in snakes and explain the biting mechanism.
- (b) Discuss the mechanics of bird flight. 7,5
6. (a) Discuss the evolution of terrestrial ectotherms.
- (b) Write a note on the affinities of Prototheria. 8,4
7. Write short notes on any *three* of the following : 4,4,4
- (i) Migration in fishes
- (ii) Cursorial adaptations in mammals
- (iii) Parental care in Amphibia
- (iv) Affinities of *Sphenodon*
- (v) General characters of Agnatha.