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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. 7,5
- (b) Discuss the mechanics of bird flight. 8,5
6. (a) Discuss the evolution of terrestrial ectotherms. 8,4
- (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.