

2016

M.Sc. 1st Semester Examination

ZOOLOGY

PAPER—ZOO-101

Full Marks : 40

Time : 2 Hours

The figures in the margin indicate full marks.

Candidates are required to give their answers in their

own words as far as practicable.

Illustrate the answers wherever necessary.

Use separate Answer-scripts for Group-A & Group-B

Group—A

(Non-Chordates)

1. Answer any two questions of the following : 2X2

- (a) Mention the difference between Parazoa and Mesozoa.  
(b) Highlight different types of larvae in aquatic metazoa.

(Turn Over)

- (c) Explain the ecological roles of free living nematodes.
- (d) State the significance of "Flagship Species".

2. Answer any *two* questions of the following : 4×2

- (a) Briefly discuss the evolution of coelom in non-chordates.
- (b) State the importance of larval forms in coelomate non-chordates.
- (c) Explain with figures stomal modifications in free living nematodes.
- (d) Briefly discuss the ecological priorities in non-chordate conservation.

3. Answer *one* question of the following : 8×1

- (a) Briefly discuss the salient features of Haeckel's theory on metazoan evolution. Add a note on relevance of molecular study in explaining metazoan evolution.

5+3

- (b) With a labelled figure highlight the morphological excellence of rotifer. Discuss on the role of environmental factors in determining the reproduction of rotifers.

3+5

**Group—B***(Chordates)*

4. Answer any *two* of the following : 2×2
- (a) Place the following fin-fishes in their appropriate orders :  
*Labeo rohita, Clarias batrachus, Anabas testudineus, Mugil cephalus.*
- (b) Cite examples of the following fin-fish orders :  
Clupeiformes, Lamniformes, Syngnathiformes,  
Tetradontiformes.
- (c) Name the accessory respiratory organs in vertebrates.
- (d) Define echolocation.
5. Write any *two* of the following : 4×2
- (a) Describe the structure of a kidney found in fish.
- (b) Describe the process of Osmoregulation in Marine fishes.
- (c) Describe morphological adaptive features in chiroptera in respect to ecolocation.
- (d) Describe how thyroid gland is originated from the endostyle.

6. Write any one of the following :

8×1

- (a) Draw a possible evolutionary tree of primate from its origin upto *Homo sapiens*.
- (b) Describe in detail the iodine cycle in chordates with a suitable illustration.
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