

2016

M.Sc. Part-I Examination

ZOOLOGY

PAPER—I (Group—A)

Full Marks : 50

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.

Group—A

Answer any *four* questions taking *two* from each unit.

Unit—I

[Non-Chordates]

1. Give a brief idea on the origin and evolution of Metazoa. State the merits and demerits of the colonial theory as proposed by Haeckel.

6½+6

(Turn Over)

2. Define Larva. State the advantages of larval study. Classify different larval forms of aquatic metazoans. Add a note on resource utilization in courses of larval development.

2+3+4+3 $\frac{1}{2}$

3. Enlist different lophophorate phyla. Discuss on the organs associated with feeding of Ectoprocta. Briefly explain the filter feeding mechanism in Ectoprocta.

2+5+5 $\frac{1}{2}$

4. Write short notes (any three) :

4+4+4 $\frac{1}{2}$

- Hydrostatic skeleton and its significance.
- Stomal modification in Nematoda.
- Mastax and its types in Rotifera.
- Significance of conservation in non chordates with special reference to conservation strategies.
- Cyclomorphosis in Rotifera.

Unit—II

[Chordates]

5. (i) Give suitable example of the fishes belonging to the following fish orders :

- Perciformes ;
- Lepidosireniformes ;
- Clupeiformes ;
- Syngnathiformes ;
- Siluriformes ;
- Mugiliformes.

- (ii) Write the salient features of the following :

- Laminiformes ;
- Ophiocephaliformes ;

6+6 $\frac{1}{2}$

6. (i) Describe the structure of endostyle found in cephalochordates.

- (ii) Give a brief out line about iodination of tyrosine in Cephalochordata.

5+7 $\frac{1}{2}$

7. (i) Describe the evolutions of gillbars and gill filaments in fishes.

(ii) Describe the mechanism of osmoregulation in marine fish. $7+5\frac{1}{2}$

8. Answer any *three* of the following: $4+4+4\frac{1}{2}$

(i) Morpho-structural adaptation for echolocation in bat.

(ii) Hyostylic, autostylic & amphistylic type of Jaw Suspension.

(iii) Origin of primates.

(iv) Internal ear of mammals.

(v) Migratory route of birds.