2018

M.Sc. 1st Seme. Examination

ZOOLOGY

PAPER—ZOO-101

Full Marks : 40

Time : 2 Hours

The figures in the right-hand 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

(Non-Chordates)

[Marks : 20]

1. Answer any *two* questions : 2×2

(a) Mention the difference between Mesozoa and Parazoa.

(b) Differentiate Protostomia from Deuterostomia.

(c) What is hydrostatic skeleton ?

(d) Briefly explain the role of key-stone species.

2. Answer any *two* questions : 2×4

(a) Give an account of the evolution of coelom in metazoa.

(b) Define cyclomorephosis. Explain this phenomenon in rotiferra. 2+2

(c) With a labelled diagram mention different specialisation in the stomal region of nematodes.

(d) Write about the mode of resource utilization in the larval stages of aquatic metazoa.

3. Answer any *one* question : 1×8

(a) (i) Briefly highlight the merits and demerits of colonial mode of evolution of metazoa as proposed by Haeckel.

(ii) Add a note on the roles of foraminifera in the marine environmental monitering process. 4+4

(b) (i) Explain the Bennet-Clarke's Model on the digestion of nematoda.

(ii) Discuss the roles of environmental factors in determining the life cycle of rotifers. 4+4

Group–B

(Chordates)

[Marks : 20]

4. Answer any *two* questions : 2×2

(a) What is osmoregulation ?

(b) Explain the process of ventilation of internal gills.

(c) What do you mean by arborescent organ in fish ?

(d) Why live fishes can survive for several hours without water ?

5. Answer any *two* questions : 2×4

(a) Give an outline sketch of fish classification.

(b) Distinguish between osmoregulators and osmoconformers.

(c) Give the structural account of endostyle in cephalochordates.

(d) Write a note on morphological adaption for ecolocation in bats.

6. Answer any *one* question : 1×8

(a) Give a schematic representation of the iodine cycle in cephalochordates.

(b) With the help of evolutionary tree explain the possible lines of ancestry and descent among the species belonging to the Human family.

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