

M.Sc 1st Semester Examination, 2013

ZOOLOGY

PAPER — ZOO- 101

Full Marks : 40

Time : 2 hours

*The figures in the right hand margin indicate 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)

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

(a) Mention the characters which appeared in course of Metazoan Evolution.

(b) Define Flug-ship species with suitable example.

(Turn Over)

(2)

(c) Differences between Protostomia and Deuterostomia.

(d) Draw a evolutionary tree highlighting protostomial relationships.

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

(a) Briefly discuss on coelom— its types and modifications in Metazoa.

(b) Explain the roles of Foraminifera in the Environmental Monitoring.

(c) Explain 'Pumping Cycle' in the digestive process in Free Living Nematoda using suitable model.

(d) Highlight the importance of invertebrate conservation.

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

(a) What is mastax ? Briefly describe different types of mastax. Write the functions of mastax. $1 + 5 + 2$

(3)

- (b) Mention the structures associated with feeding in 'Ectoprocta'. Discuss the filter feeding mechanism in Ectoprocta explaining relevant hypothesis. Add a note on Lophophorate Relationships'. 3 + 3 + 2

GROUP – B

(*Chordates*)

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

(a) Give suitable examples of the finfish order :

(i) Lamniformes

(ii) Chepeiformes.

(b) Write distinctive characters of cypriniformes and pleuroneutiformes.

(c) Chemical name of T₃ & T₄.

(d) Different types of kidneys found in vertebrates.

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

- (a) Structural modification in Chiropterans for echolocation.
- (b) How air-breathing fishes respire with atmospheric oxygen ?
- (c) Draw a sketch on the iodine cycle in protochordates.
- (d) Evolution of *Homo sapiens Sapiens*—stating the age *or* geographical era.

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

- (a) What is endostyle ? Describe the five structure of an endostyle. 2 + 6
 - (b) Define Nephron. Describe in brief on the fine structure of Mammalian kidney tubules. 2 + 6
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