

AQ – 819

First Semester M. Sc. I (Zoology) Examination

Paper – I

ANIMAL STRUCTURE AND FUNCTION

(Non – Chordata)

P. Pages : 3

Time : Three Hours]

[Max. Marks : 80

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- Note :** (1) All questions are compulsory.
(2) All questions carry equal marks.
(3) Draw labelled diagrams wherever necessary.

1. Describe the biosystematic trends with reference to chemotaxonomy and cytotaxonomy.

OR

Discuss parsimony and cladistic methods of classification. 16

2. Explain the followings :—

- (a) Nutrition in Protozoa.
- (b) Feeding and digestion in an Echinodermata.
- (c) Structure of cilia.
- (d) Hydrostatic movement in an Annilid.

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OR

- (e) Feeding diversity in insects.
- (f) Feeding mechanism in bivalve Mollusc.
- (g) Filter feeding in Crustacea.
- (h) Mechanism of flagellar movement. 16

3. Give an account of the followings :—

- (i) Cutaneous respiration.
- (j) Book Lungs.
- (k) Tracheal system.
- (l) Excretion in Protozoa.

OR

- (m) Gills of Crustacea.
- (n) Respiratory pigments in invertebrates.
- (o) Excretory structures in Platyhelminthes.
- (p) Structure and function of Malpighian tubules.

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4. Explain the followings :—

- (q) Nervous system of coelenterata.

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- (r) Nervous system of insects.
- (s) Photoreception.
- (t) Chemotaxis in insects.

OR

- (u) Nervous system in any one annelid.
- (v) Ommatidium.
- (w) Mechanoreceptors.
- (x) Nervous system in any one Echinoderm.

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5. Describe the larval forms in *Fasciola hepatica*.

OR

Describe the types of metamorphosis in insects and its hormonal control.

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