

M.Sc. Semester-I (C.B.C.S. Scheme) Examination
ZOOLOGY
Paper—I
(Animal Structure and Function)
(Non-Chordata)

Time : Three Hours]

[Maximum Marks : 80

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

1. Describe the following :

- (a) Chemotaxonomy
- (b) Species category
- (c) Cladistic method of classification
- (d) Parsimony method of classification.

OR

- (e) History of classification
- (f) Molecular taxonomy
- (g) Different species concepts
- (h) Phylogram and cladogram.

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2. Give an account on feeding diversity in insects.

OR

Describe flight mechanism in insects.

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3. Describe the following :

- (i) Gills
- (j) Tracheal respiration in insects
- (k) Excretory structures in Annelids
- (l) Functions of excretory organs in Helminthes.

OR

- (m) Body surface as organ of respiration
- (n) Book lungs
- (o) Mechanisms of gill respiration in Mollusca
- (p) Functions of Malpighian tubules in insects.

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4. Describe the following :

- (q) Nervous system in Coelenterata
- (r) Nervous system in Crustaceans
- (s) Morphology of compound eye in insects
- (t) Mechanoreceptors.

OR

- (u) Nervous system in Echinodermata
- (v) Chemoreception in insects
- (w) Animal orientations in nonchordates and chemical senses
- (x) Nervous system in cephalopods.

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5. Describe sexual reproductive mechanisms in nonchordates.

OR

Describe metamorphosis and molting in insects and its hormonal control.

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