



SIR C.R.REDDY AUTONOMOUS COLLEGE, ELURU

(Affiliated to Adikavi Nannaya University, Rajamahendravaram)

I B.Sc. - 1 SEMESTER syllabus (under CBCS pattern)

SUBJECT: ZOOLOGY

PAPER I- BIOLOGY OF NON-CHORDATES

PART-A (Protozoa to Nemathelminthes)

UNIT-I

- 1.1 Brief history, significance of diversity of non-chordates
- 1.2 **Protozoa**
 - 1.2.1 General characters
 - 1.2.2 Classification of protozoa up to classes with examples
 - 1.2.3 Eliphidium (type study)
- 1.3 **Porifera**
 - 1.3.1 General characters
 - 1.3.2 Classification of porifera up to classes with examples
 - 1.3.3 Sycon- external characters, types of cells
 - 1.3.4 Skeleton in sponges
 - 1.3.5 Canal system in sponges)

UNIT-II

- 2.1 **Coelenterata**
 - 2.1.1 General characters
 - 2.1.2 Classification of Coelenterata up to classes with examples
 - 2.1.3 Obelia- External characters, structure of polyp and medusa,
 - 2.1.4 Polymorphisms in coelenterates
 - 2.1.5 Corals and Coral reefs.

UNIT-III

3.1 Platyhelminthes

- 3.1.1. General characters
- 3.1.2. Classification of Platyhelminthes up to classes with examples.
- 3.1.3 Faciola Hepatica- External characters, excretory system, Reproductive system, Life history and Pathogenicity.

3.2 Nemathelminthes

- 3.2.1 General characters
- 3.2.2 Classification of Nemathelminthes up to classes with examples.

PART B (Annelida to Non-Chordata larval form)

UNIT-IV

4.1 Annelida

4.1.1 General characters

4.1.2 Classification of Annelida up to classes with examples.

4.1.3 Hirudinaria granulosa- external characters, digestive system, excretory system and reproductive system.

4.1.4 Coelomoducts

4.1.5 Vermiculture- Scope, Significance, Earthworm species, processing, Vermicompost, Economic importance of vermicompost.

Additional Input:

4.1.6 Metamerism in Annelida

UNIT-V

5.1 Arthropoda

5.1.2 General characters

5.1.2 Classification of Arthropod up to classes with examples.

5.1.3 Prawn- external characters, Appendages, Respiratory system and Circulatory system

5.2 Mollusca

5.2.1. General characters

5.2.2 Classification of Mollusca up to classes with examples

5.2.3 Pearl formation in pelecypoda.

5.2.4 Torsion in gastropods

UNIT-VI

6.1 Echinodermata

6.1.1. General characters

6.1.2. Classification of Echinodermata up to classes with examples

6.1.3. Water vascular system in star fish

6.2 Hemichordata

6.2.1 General characters

6.2.2 Classification, of Hemichordata up to classes with examples

6.2.3. Balanoglossus- structure and affinities.

6.3. Non- chordate larval forms

6.3.1. Amphiblastula

6.3.2. Ephyra

6.3.3 Trochophora

6.3.4. Nauplius

6.3.5. Glochidium

6.3.6. Bipinnaria

6.3.7. Tornaria



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I B.Sc.- 1 SEMESTER MODEL PAPER (under CBCS pattern)

SUBJECT: ZOOLOGY

Time: 3Hrs

PAPER I- BIOLOGY OF NON-CHORDATES

Max.Marks: 75

Section-A

This section consists of two parts.

Candidates have to answer FOUR questions choosing at least ONE question from each part

Each question carries 10 marks.

PART-A (Protozoa to Nematelminthes)

1. Write the general characters of phylum protozoa and classify it up to level of classes.
2. Write an essay on canal system in sponges
3. Describe briefly about formation of coral reefs
4. Write the general characters of phylum Platyhelminthes and classify it up to level of classes.

PART-B (Annelida to Non-Chordata larval forms)

5. Write about reproductive system of leech.
6. Describe the respiratory system in prawn.
7. Write the general characters of phylum Echinodermata and classify it up to the level of classes.
8. Give the affinities and systematic position of balanoglossus.

Section-B

- Answer any Five of the following:
 - Each question carries Five marks:
9. Rhizopoda
 10. Choano cytes

11. Corals
12. Cercaria
13. Vermicompost
14. Cephalic appendages in prawn
15. Pearl formation
16. Bipinneria larva

Section-C

- **Answer any Five of the following:**
- **Each question carries Two marks:**

17. Cnidospore
18. Microspheric form
19. Spicules
20. Atoll
21. Flame cell
22. Osphradium
23. Pedicellaria
24. Tornaria larva