



ZOOLOGY SEMESTER -1st (MAJOR/MINOR - NEP-2020)

Credits: 4

Session-2022

Course Title: Animal Diversity- Invertebrates

Marks: 15 (Internal) + 45 (External)

Course Code: UGZOO22M101

Contact Hours: 45+30

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Learning objectives:

Students will be able to

1. Classify different animals and understand the basis of classification.
2. Attain knowledge about distinguishing characteristic features of different invertebrate phyla.
3. Devise a phylogenetic relationship between the different phyla from evolutionary perspective.

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Learning outcomes:

After the completion of the syllabus the student will gain knowledge of.

1. Identification of the animal.
2. Modification of basic body plan.
3. Relationship of various phyla.
4. Advantages and disadvantages of each phylum.

Unit -1: Non-Chordate-I

(General characters and classification up to order level)

- 1.1. Animal Protista
- 1.2. Porifera
- 1.3. Coelenterata
- 1.4. Helminths: Platyhelminthes and Nematodes

Unit-2: Non-Chordata -II

(General characters and classification up to order level)

- 2.1. Annelida
- 2.2. Arthropoda
- 2.3. Mollusca
- 2.4. Echinodermata

Unit-3: Non-Chordate -Structure and Function

- 3.1. Canal system in Porifera
- 3.2. Polymorphism in Coelenterate
- 3.3. Metamerism in Annelida
- 3.4. Water vascular system in Echinodermata

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Unit- 4: Lab Course

4.1. Study of Museum Specimens

Paramecium, Euglena, Amoeba, Sycon, Euplectella, Clathrina, Hydra, Obelia, Physalia, Fasciola, Planaria, Taenia, Ascaris (Male and female), Wuchereria, Nereis, Aphrodite, Hirudinnaria, Palaemon, Brachyura, Daphnia, Julus, Scolopendra, Pila, Sepia, Loligo, Octopus, Antedon, Holothuria, Asterias.

4.2. Model/Chart/Slide

4.2.1. Skeleton of porifera.

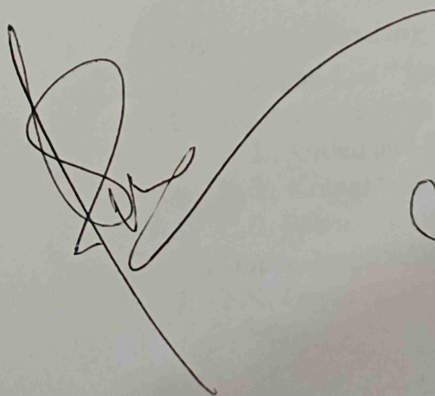
4.2.2. Polyp and Medusa.

4.2.3. *Taenia* (Scolex, Mature Proglottid), larval forms of *Fasciola*.

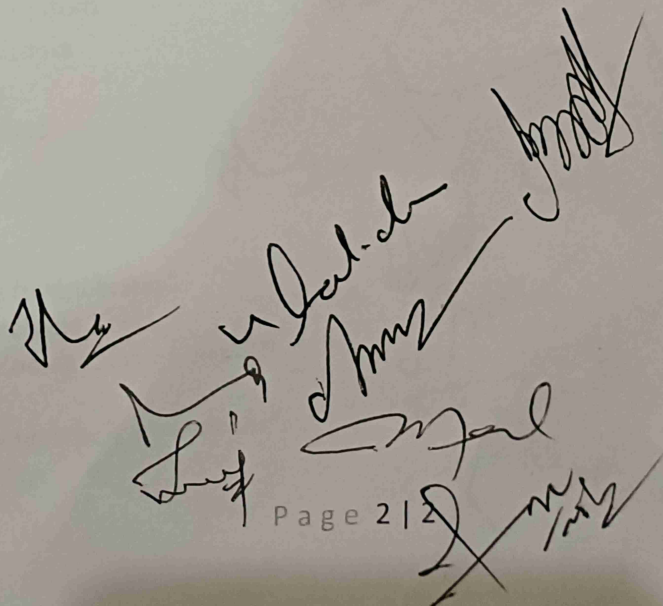
4.3. Collection/Identification of local invertebrate fauna.

Suggested Reading:

1. Robert D. Barnes "Invertebrate Zoology"
2. Shannon Lee "Invertebrate Zoology"
3. Richard C. Brusca, Moore and Shuster "Invertebrates"
4. Janet Moore "An Introduction to the Invertebrates"
5. E. L. Jordan and P. S. Verma "Invertebrate Zoology"
6. R. L. Kotpal "Modern text book of Zoology: Invertebrates"
7. Jan A. Pechenik "Biology of Invertebrates"
8. Bernd Schierwater "Invertebrate Zoology: A tree of life approach"



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