

COMPLEMENTARY COURSE : ZOOLOGY –MODEL I

SEMESTER I. ZY1CMT01.

COMPLEMENTARY COURSE 1

NON CHORDATE DIVERSITY

36 hrs
Credits 2

Objectives:

1. To study the scientific classification of invertebrate fauna.
2. To learn the physiological and anatomical peculiarities of some invertebrate phyla through type study.
3. To learn the unity of life with rich diversity of organisms & evolutionary significance of certain invertebrate fauna
4. To stimulate the curiosity of students' in the biota living around them.

Module I

10 Hrs

Introduction: Five kingdom classification

Kingdom Protista: Salient features (any five important salient features) of each phylum with one example each (detailed account of example is not necessary).

Phylum Rhizopoda	(eg: Amoeba)
Phylum Actinopoda	(eg: Actinophrys)
Phylum Dinoflagellata	(eg: Noctiluca)
Phylum Parabasalia	(eg: Trychonympha)
Phylum Metamonda	(eg: Giardia)
Phylum Kinetoplasta	(eg: Trypanosoma)
Phylum Euglenophyta	(eg: Euglena)
Phylum Cryptophyta	(eg: Cryptomonas)
Phylum Opalinata	(eg: Opalina)
Phylum Bacillariophyta	(eg: Diatoms)
Phylum Chlorophyta	(eg: Volvox)
Phylum Choanoflagellata	(eg: Proterospongia)
Phylum Ciliophora	(eg: Paramecium)
Phylum Sporozoa	(eg: Plasmodium)
Phylum Microsporidia	(eg: Nosema)
Phylum Rhodophyta	(eg: Red algae)

General Topic: Pathogenic Protists – Plasmodium, Entamoeba

Module II

3 Hrs

Phylum Porifera: Salient features (eg: Leucosolenia)

Phylum Coelenterata: Salient features and classification upto class.

Class 1: Hydrozoa (eg: Physalia)

Class 2: Scyphozoa (eg: Aurelia)

Class 3: Anthozoa (eg: Adamsia)

General Topic: Corals and Coral reefs.

Module III

6 Hrs

Phylum Platyhelminthes: Salient features and classification up to class.

Class 1: Turbellaria (eg: Planaria)

Class 2: Trematoda (eg: Fasciola)

Class 3: Cestoda (eg: *Taenia solium*)

Phylum Nematoda: Salient features and classification up to class.

Class 1: Phasmida (eg: Wuchereria)

Class 2: Aphasmida (eg: Trichinella)

Phylum Annelida: Salient features and classification up to class.

Class 1: Polychaeta (eg: Nereis)

Class 2: Oligochaeta (eg: Pheretima)

Class 3: Hirudinomorpha (eg: Hirudinaria)

Module IV

11 Hrs

Phylum Arthropoda: Salient features. Type study – *Fenneropenaeus* (Penaeus) - habitat, morphology, appendages, sexual dimorphism, digestive system, respiratory system, circulatory system, excretory system, nervous system, sense organs, reproductive system, larval stages.

Classification up to class with one example each

Subphylum Trilobitomorpha

Class 1: Trilobita (Extinct) (eg: Dalmanites)

Subphylum: Chelicerata

Class 1: Merostoma (eg: Limulus)

Class 2: Arachnida (eg: Spider)

Class 3: Pycnogonida (eg: Nymphon)

Subphylum Mandibulata

Class 1: Crustacea (eg: Daphnia)

Class 2: Chilopoda (eg: Centipede)

Class 3: Symphyla (eg: Scutigera)

Class 4: Diplopoda (eg: Millipede)

Class 5: Pauropoda (eg: Pauropus)

Class 6: Insecta (eg: Butterfly)

Module V

6 Hrs

Phylum Mollusca: Salient features and classification up to class

Class 1: Aplousobranchia (eg: Neomenia)

Class 2: Monoplousobranchia (eg: Neopilina)

Class 3: Polyplousobranchia (eg: Chiton)

Class 4: Bivalvia (eg: Perna)

Class 5: Gastropoda (eg: Xancus)

Class 6: Cephalopoda (eg: Sepia)

Class 7: Scaphopoda (eg: Dentalium)

Phylum Echinodermata : Salient features and classification up to class.

Class 1: Asterozoa (eg: Astropecten)

Class 2: Ophiurozoa (eg: Ophiothrix)

Class 3: Echinozoa (eg: Echinus)

Class 4: Holothurozoa (eg: Holothuria)

Class 5: Crinozoa (eg: Antedon)

Phylum Hemichordata : Salient features (eg: Balanoglossus.)

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SEMESTER I

COMPLEMENTARY COURSE 1 - PRACTICAL

NON CHORDATE DIVERSITY

36 Hrs

Credit 1

1. Scientific drawing - 5 specimens
2. Simple identification - 10 invertebrates, out of which 5 by their scientific names
3. T.S - Earthworm, T.S Fasciola
4. Dissection - Nervous system of Prawn
5. Dissection - Nervous system of Cockroach
6. Mounting - Prawn Appendages