

Course Name: Non-Chordates Marks 70+30=100
Course Code- ZO (N) -101 Credits: 3

Non-Chordates ZO (N) -101

UNIT WISE CONTENTS

Block I: Lower Non chordate

Unit 1: Phylum Protozoa

General characters Classification up to order. Study of *Paramecium* with particular reference to locomotion, nutrition, osmoregulation and reproduction.

Unit 2: Metazoa

Germ layers, diploblastics and triploblastics organization.

Unit 3: Phylum Porifera

General charactersand Classification up to order level. *Sycon* with special reference to structure, reproduction and development. Canal systems and affinities.

Unit 4: Phylum Coelentrata

General charactersand Classification up to order level. *Aurelia* with special reference to structure, reproduction, development and polymorphism. A brief account of corals and coral reefs and their importance.

Unit 5: Phylum Platyhelminthes

General charactersand Classification up to order level. Study of *Fasciola* with reference to structure, reproduction and parasitic adaptations.

Unit 6: Phylum Nematelminthes

General charactersand Classification up to order level. Study of *Ascaris* with special reference to structure, reproduction and development.

Unit 7: Phylum Annelida

General charactersand Classification up to order level. *Nereis* with special reference to structure, reproduction and development. Metamerism and Parasitic adaptations in *Hirudinaria*.

Block II: Higher Non Chordata

Unit 8: Phylum Arthropoda

General charactersand Classification up to order level. *Palaemon* with special reference to structure, reproduction and development. Zoological importance of *Peripatus*. Types of mouth parts in insects. Social insects and their economic importance.

Unit 9: Phylum Mollusca

General characters and Classification up to order level. *Pila* with special reference to structure, reproduction and development.

Unit 10: Phylum Echinodermata

General characters and Classification up to order level. *Asterias* with special reference to structure, locomotion, mode of feeding and reproduction.

Course Name: Non-Chordata

Marks = 50

Course Code: ZO (N) 101L

Credit =1

UNIT SCHEDULE

Block I: Museum Specimen study

Unit1: Protozoa (study of Permanent slides)

Unit2: Porifera (Study of permanent slides and Museum specimens)

Unit3: Coelentrata (Study of museum specimens and permanent slides)

Unit4: Annelida (Study of museum specimens, permanent slide and slide preparation and study)

Unit5: Platyhelminthes

Unit6: Nematoda

Unit7: Arthropoda (Museum specimens, whole mount and slide preparation)

Unit8: Mollusca (Museum specimens, whole mount/slides and slide preparation)

Unit9: Echinodermata (Museum specimens, whole mount/slides and slide preparation)

UNIT WISE CONTENTS ZO (N) -101L)

Identification, systematic position up to order and general study of the following animal forms, microscopic slides / museum specimens:

Unit 1: Protozoa: *Amoeba*, *Paramecium*, *Euglena*, *Ceratium* and *Noctiluca*. *Plasmodium*, *Monocystis*, *Trypanosoma*, *Leishmania*, *Entamoeba* and *Giardia*

Unit 2: Porifera: *Leucosolenia*, *Grantia*, *Scypha*, *Hyalonema*, *Euplectella*, *Spongilla* and *Euspongia*. L. S. and T. S. of *Scypha* / *Grantia*

Unit 3: Coelentrata: Medusa of *Obelia*, larval stages of *Aurelia*, *Physalia*, *Porpita*, *Vellela*, *Tubipora*, *Millepora*, *Aurelia*, *Gorgonium*, *Pennatua*, *Alcyonium*, *Adamsia*

Unit 4: Platyhelminthes: *Dugesia*, *Fasciola* and *Taenia*. Transverse sections of *Fasciola* and *Taenia*, mature and gravid proglottids of *Taenia*, developmental stages of *Fasciola* and *Taenia*

Unit 5: Nematoda: *Ascaris*, *Ancylostoma*, *Dracunculus*, *Wuchereria*, *Trichinella*, *Schistosoma* and *Enterobius*

Unit 6: Annelida: *Nereis*, *Heteronereis*, *Aphrodite*, *Arenicola*, *Metaphire*, *Pontobdella*, and *Hirudinaria*. Transverse sections of *Nereis* and *Hirudinaria*, Trochophore larva of *Nereis*, Parapodium of *Nereis* and *Heteronereis*

Unit 7: Arthropoda : *Limulus*, Spider, *Palamnaeus*, *Apus*, *Lepas*, *Balanus*, *Sacculina*, *Palaemon*, Lobster, *Eupagurus*, Crab, *Lepisma*, *Odontotermes*, *Pediculus*, *Schistocerca*, *Papilio*, *Bombyx*, *Xenopsylla*,

Apis, *Julus* and *Scolopendra*. Crustacean larvae (*Nauplius*, *Zoea*, *Megalopa* and *Mysis*), mosquito larva & pupa. *Sacculina*, Lice, flea, bedbug, tick and mites

Unit 8: Mollusca *Chiton*, *Dentalium*, *Sepia*, *Patella*, *Pila*, *Turbinella*, *Aplysia*, Slug, Snail, *Mytilus*, Octopus. Transverse sections of *Lamellidens* and *Glochidium* larva

Unit 9: Echinodermata: *Pentaceros*, *Asterias*, *Ophiothrix*, *Echinus*, *Holothuria* and *Antedon*. Pedicellariae of Star fish

Unit 10: Study of living animals: *Amoebia*, *Paramoecium*, *Euglena*, *Hydra* and reicalciliates