ST. JOSEPH’S COLLEGE FOR WOMEN (AUTONOMOUS) VISAKHAPATNAM

II SEMESTER **ZOOLOGY**  TIME:2Hrs/Week

Z-Ma1-2551(1) **ANIMAL DIVERSITY-I BIOLOGY OF NON-CHORDATES** Marks:50

w.e.f. 2023-24 admitted batch (23AK) **(Algae, Fungi, Lichens and Bryophytes)**

**PRACTICAL SYLLABUS**

# LEARNING OBJECTIVES

* To understand the importance of preservation of museum specimens
* To identify animals based on special identifying characters
* To understand different organ systems through demo or virtual dissections
* To maintain a neat, labelled record of identified museum specimens

# SYLLABUS:

Study of museum slides / specimens / models (Classification of animals up to orders)

* Protozoa: Amoeba*, Paramoecium, Paramoecium Binary fission and Conjugation, Vorticella, Entamoeba histolytica, Plasmodium vivax*
* Porifera: *Sycon, Spongilla, Euspongia, Sycon*- T.S & L.S, Spicules, Gemmule
* Coelenterata: *Obelia – Colony & Medusa, Aurelia, Physalia, Velella, Corallium,Gorgonia, Pennatula*
* Platyhelminthes: *Planaria, Fasciola hepatica, Fasciola* larval forms – Miracidium,Redia, Cercaria, *Echinococcus granulosus, Taenia solium, Schistosoma haematobium*
* Nemathelminths: *Ascaris (Male & Female), Drancunculus, Ancylostoma,Wuchereria*
* Annelida: *Nereis, Aphrodite, Chaetopteurs, Hirudinaria,* Trochophore larva
* Arthropoda: Cancer, *Palaemon*, Scorpion, *Scolopendra, Sacculina, Limulus, Peripatus,*
  + Larvae - Nauplius, Mysis, Zoea, Mouth parts of male *&*female *Anopheles*and *Culex,* Mouthparts of Housefly and Butterfly.
* Mollusca:*Chiton, Pila, Unio, Pteredo, Murex, Sepia, Loligo, Octopus, Nautilus,*
  + - Glochidium larva
* Echinodermata: *Asterias, Ophiothrix, Echinus, Clypeaster, Cucumaria, Antedon,*
  + - Bipinnaria larva
* Hemichordata: *Balanoglossus,* Tornaria larva

# DISSECTIONS:

Computer - aided techniques should be adopted or show virtual dissections Dissection of edible (Prawn/Pila) invertebrate as per UGC guidelines

An “Animal album” containing photographs, cut outs, with appropriate write up about the above- mentioned taxa. Different taxa/ topics may be given to different setsof students for this purpose

# RFERENCE WEB LINKS:

* <https://virtualmicroscopy.peabody.yale.edu/>
* <https://tnhm.in/category/assorted-gallery-for-vertebrates-and-invetebrates/invertebrates/>
* <http://www.nhc.ed.ac.uk/index.php?page=24.25.312>
* <https://biologyjunction.com/invertebrate-notes/>
* <https://lanwebs.lander.edu/faculty/rsfox/invertebrates/>
* <http://www.zoologyresources.com/uploadfiles/books/dc64b77d8769325515d17c945e461b45.pdf>

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