

**RAYALASEEMA UNIVERSITY, KURNOOL**  
**ZOOLOGY SYLLABUS FOR I SEMESTER – 2022-23**

**PAPER – I: ANIMAL DIVERSITY – BIOLOGY OF NONCHORDATES**

**HOURS: 60 (5X12)**

**Max. Marks: 100**

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**UNIT I**

1.1 Principles of Taxonomy – Binomial nomenclature – Rules of nomenclature

**Phylum Protozoa**

1.2 General Characters and classification of protozoa up to classes with suitable examples

1.3 *Elphidium* (type study)

**UNIT –II**

**Phylum Porifera**

2.1 General characters and classification up to classes with suitable examples

2.2 Skelton in Sponges

2.3 Canal system in sponges

**Phylum Coelenterata**

2.4 General characters and classification up to classes with suitable examples

2.5 Metagenesis in *Obelia*

2.6 Polymorphism in coelenterates

**Unit – III**

**Phylum Platyhelminthes**

3.1 General characters and classification up to classes with suitable examples

3.2 Life cycle and pathogenecity of *Fasciola hepatica*

3.3 Parasitic Adaptations in helminthes

**Phylum Nemathelminthes**

3.4 General characters and classification up to classes with suitable examples

**Unit – IV**

**Phylum Annelida**

4.1 General characters and classification up to classes with suitable examples

4.2 Vermiculture - Scope, significance, earthworm species, processing,

Vermicompost, economic importance of vermicompost

**Phylum Arthropoda**

4.3 General characters and classification up to classes with suitable examples

4.4 Metamorphosis in Insects

4.5 *Peripatus* - Structure and affinities

**Unit – V**

**Phylum Mollusca**

5.1 General characters and classification up to classes with suitable examples

5.2 Pearl formation in Pelecypoda

**Phylum Echinodermata**

5.3 General characters and classification up to classes with suitable examples

5.4 Water vascular system in star fish

5.5 Larval forms of Echinodermata

**Phylum Hemichordata**

5.6 General characters and classification up to classes with suitable examples

5.7 *Balanoglossus* - Structure and affinities

# ZOOLOGY PRACTICAL SYLLABUS FOR I SEMESTER

## ZOOLOGY - PAPER - I

### ANIMAL DIVERSITY - BIOLOGY OF NONCHORDATES

Periods: 24

Max. Marks: 50

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#### Syllabus :

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

**Protozoa:** *Amoeba*, *Paramoecium*, *Paramoecium* Binary fission and Conjugation, *Vorticella*, *Entamoebahistoltyica*, *Plasmodium vivax*

**Porifera:** *Sycon*, *Spongilla*, *Euspongia*, *Sycon*- T.S & L.S, Spicules, Gemmule

**Coelenterata:** *Obelia* – Colony & *Medusa*, *Aurelia*, *Physalia*, *Verella*, *Corallium*, *Gorgonia*, *Pennatula*.

**Platyhelminthes:** *Planaria*, *Fasciola hepatica*, *Fasciola* larval forms – Miracidium, Redia, Cercaria, *Echinococcus granulosus*, *Taenia solium*, *Schistosoma haematobium*

**Nemathelminthes:** *Ascaris*(Male & Female), *Drancunculus*, *Ancylostoma*, *Wuchereria*

**Annelida:** *Nereis*, *Aphrodite*, *Chaetopteurs*, *Hirudinaria*, Trochophore larva

**Arthropoda:** *Cancer*, *Palaemon*, *Scorpion*, *Scolopendra*, *Sacculina*, *Limulus*, *Peripatus*, Larvae - Nauplius, Mysis, Zoa, 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

#### 2. Dissections:

1. **Prawn:** Appendages, Digestive system, Nervous system, Mounting of Statocyst

2. **Insect Mouth Parts**

3. **Laboratory Record work shall be submitted at the time of practical examination**

**20C 1308**

**B.Sc (Three Year) DEGREE EXAMINATION**

**End Semester Examination**

**First Semester**

**ZOOLOGY**

**PAPER – I: ANIMAL DIVERSITY: BIOLOGY OF NON CHORDATES**

Time: 3 Hours

Max. Marks: 75

**PART – A**

I. Answer all objective questions (10x1=10Marks)

1. Which exhibit Protozoan bioluminescence among the following?  
A. Amoeba  
B. Stentor  
C. Noctiluca  
D. Entamoeba
2. Name the scientist who proposed Binomial nomenclature  
A. Antonie Van Leeuwenhoek  
B. Carl von Linnaeus  
C. Karl Ernst Von Baer  
D. Gregor Mendel
3. How many germ layers present in sponges  
A. 1  
B. 2  
C. 3  
D. 4
4. Common name of Obelia  
A. Sea fur  
B. Sea Potato  
C. Sea fan  
D. Sea Plum
5. Excretory cells in Fasciola hepatica  
A. Germ cells  
B. Cnidoblast cells  
C. Flame cells  
D. Gland cells
6. Scientific name of Blood fluke  
A. Taenia solium  
B. Trichinella spiralis  
C. Dracunculus medinensis  
D. Schistosoma haematobium
7. Why Arthropods are the most successful group of animals  
A. Presence of appendages  
B. Presence of hemocoel  
C. Presence of exoskeleton  
D. Presence of many larvae
8. Which one is the largest class of animals?  
A. Arachnida  
B. Insecta  
C. Crustacean  
D. Merostomata
9. What are the locomotory organs in star fish?  
A. Tube Foot  
B. Setae  
C. Parapodia  
D. Fins
10. Radula is present in which class of Molluscans  
A. Pelicypoda  
B. Gastropoda  
C. Scaphopoda  
D. Monoplacophora

II. Answer all fill in the blank questions (5x1=5Marks)

11. Sleeping sickness disease caused by\_\_\_\_\_
12. \_\_\_\_\_ animal called as dead man fingers.
13. Scientific name of Eye worm\_\_\_\_\_
14. \_\_\_\_\_ is the largest class in animal kingdom.
15. Respiratory trees are present in\_\_\_\_\_

Answer all short answers questions (5x2=10 Marks)

16. Write any two rules of binomial nomenclature.
17. What are the differences between polyp and medusa?
18. What is Polyembryony.
19. Why the phylum named as Arthropoda
20. What is the use of chystalline style in Molluscans.

PART – B

III. Answer ALL the following questions (5x10=50 marks)

Draw labeled diagrams where ever necessary

21. (a) Describe the Principles of Taxonomy with examples?  
Or  
(b) Write the structure of Elphidium?
22. (a) Describe various types of Polymorphism in Coelenterata?  
Or  
(b) Explain about Sycon type of canal system in sponges?
23. (a) Write about parasitic adaptations in Helminthes?  
Or  
(b) Elaborate the life history and pathogenicity of Fasciola hepatica?
24. (a) Enumerate the economic importance of Vermicompost.  
Or  
(b) Explain different types of metamorphosis in Arthropoda?
25. (a) Write about affinities of Balanoglossus?  
Or  
(b) Explain about pearl formation in Pelecypoda?

**This is prepared by B.O.S team of Rayalaseema University**

**Any doubts and queries please contact:**

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