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| **DEPARTMENT OF ZOOLOGY**  **Introduction to programme:**  Bsc cbz course was introduced way back in 1962 and still considered as an informative area for students of non mathematics back ground as it gives an of depth of inter disciplinary aspect of animal world in relation to plants and chemicals .  **Programme out comes:**  After completion of B.Sc (CBZ) degree, one can get employed in Non-scientific sector in addition to scientific sectors. They can seek out for career in Research laboratories, Government Corporations, banking and finance sector and so on.  B.Sc graduates can opt to join at post graduate level degree programme in their respective field. Some students they also been known to opt for non-science Master Degrees like Journalism, animation, computers, Business Administration etc.  Programme specific out comes :   * To acquire the knowledge of zoological terms facts concept and principals. * To enable students to obtain clear comprehension of the significance of animals and their importance in ecosystem welfare. * To provide a high quality professional education to the animal science students.     **APPORVED SYLLABUS THROUGH BOS 2017-18 DT:12-07-2017** |
| **(For Admitted Batch2017-2018)**  **A.S.D.GOVT.DEGREE COLLEGEFOR WOMEN (A) KAKINADA**  **B.Sc Zoology(CBCS) SYLLABUS** |
| **Zoo1306-Brief history, Significance of Diversity of Non Chordates** |
| **TOTAL HOURS: 48**  **CREDITS: 4** |
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| **UNIT-I**  **No. of hours: 12** |

**1.1 Brief history, Significance of Diversity of Non Chordates**

## 1.2 Protozoa

1.2.1 General characters

1.2.2 Classification of Protozoa up to classes with examples

1.2.3 *Elphidium* (type study)

## 1.3 Porifera

1.3.1 General characters

1.3.2 Classification of Porifera up to classes with examples

1.3.3 *Sycon* – External Characters, Types of cells,

1.3.4 Skelton in Sponges

1.3.5 Canal system in sponges

**Unit - II**

## 2.1 Coelenterata

2.1.1 General characters

2.1.2 Classification of Coelenterata up to classes with examples

2.1.3 *Obelia* - External Characters, Structure of Polyp and Medusa

2.1.4 Polymorphism in coelenterates

2.1.5 Corals and coral reef formation

## 2.2 Platyhelminthes

2.1.1 General characters

2.1.2 Classification of Platyhelminthes upto classes with examples

2.1.3 *Fasciola hepatica* - External Characters, Excretory system, Reproductive System,

Life History and pathogenicity

**Unit - III**

## 3.1 Nemathelminthes

3.1.1 General characters

3.1.2 Classification of Nemathelminthes up to classes with examples

## 3.2 Annelida

3.2.1 General characters

3.2.2 Classification of Annelida up to classes with examples

3.2.3 *Hirudinaria granulosa* - External Characters, Digestive System, Excretory System

and Reproductive System

3.2.4 Coelomoducts

3.2.5 Vermiculture - Scope, significance, earthworm species, processing, Vermicompost, economic importance of vermicompost

**Unit - IV**

## 4.1 Arthropoda

4.1.1 General characters

4.1.2 Classification of Arthropoda up to classes with examples

4.1.3 Prawn - External Characters, Appendages, Respiratory system and Circulatory

System

4.1.4 *Peripatus* - Structure and affinities

## 4.2 Mollusca

4.2.1 General characters

4.2.2 Classification of Mollusca up to classes with examples

4.2.3 Pearl formation in Pelecypoda

4.2.4 Torsion in gastropods

**Unit - V**

## 5.1 Echinodermata

5.1.1 General characters

5.1.2 Classification of Echinodermata up to classes with examples

5.1.3 Water vascular system in star fish

## 5.2 Hemichordata

5.2.1 General characters

5.2.2 Classification of Hemichordata up to classes with examples

5.2.3 *Balanoglossus* - Structure and affinities

## 5.3 Non-Chordata larval forms

5.3.1 Amphiblastula

5.3.2 Ephyra

5.3.3 Trochophore

5.3.4 Nauplius

5.3.5 Glochidium

5.3.6 Bipinnaria

5.3.7 Tornaria

**zoology practical syllabus for i semester**

**ZOOLOGY - PAPER - I**

**animal diversity - nonchordates**

**Periods: 24 zoo1306P Max. Marks: 50**

**Credits:2**

**Observation of the following slides / spotters / models**

**Protozoa :** *Elphidium, Paramecium -* Binary fission and conjugation

**Porifera :** *Spoonbill, Euspongia, Sycon, Sycon* - T.S and L.S

**Coelenterata :** *Obelia* - colony and medusa, *Physalia, Velella, Corallium, Gorgonia, Pennatula*

**Platyhelminthes :** *Planaria, Fasciola hepatica, Fasciola* larval forms - Miracidium, Redia, Cercaria, *Echinococcus granulosus*

**Nemathelminthes :** *Ascaris -* Male and female, *Ancylostoma duodenale*

**Annelida :** *Neries, Heteroneries, Aphrodite, Hirudo,* Trochophore larva

**Arthropoda :** Mouth parts of male and female *Anopheles* and *Culex,* Mouth parts of housefly, Mouth parts of Scorpion, Nauplius, Mysis, Zoea larvae, crab, prawn, *Scolopendra, Sacculina, Limulus, Peripatus*

**Mollusca :** *Chiton, Murex, Sepia, Loligo, Octopus, Nautilus,* Glochidium larva

**Echinodermata :** *Ophiothrix, Echinus, Clypeaster, Cucumaria, Antedon, Asterias,* Bipinnaria larva

**Hemichordata :** *Balanoglossus,* Tornaria larva

**Demonstration of dissection / dissected / virtual dissection :**

1. Leech / Prawn / Scorpion / Crab - Digestive system

2. Prawn - Appendages

3. Prawn / Scorpion / Crab - Nervous system

4. *Pila / Unio* - Digestive system

5. Mounting of Statocyst

6. Mounting of Radula

b **Laboratory record work shall be submitted at the time of practical examination**

b **Compulsory one species to be adopted for demonstration only by the faculty**

b **Computer aided techniques should be adopted as per UGC guide lines**

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