

AP STATE COUNCIL OF HIGHER EDUCATION  
**ZOOLOGY COURSE STRUCTURE UNDER CBCS** (w.e.f. 2015-16, Revised)

YEAR	SEMESTER	PAPER	TITLE	MARKS	CREDITS	
<b>I</b>	<b>I</b>	<b>I</b>	Biology of Non-chordates	100	03	
			Practical - I	50	02	
	<b>II</b>	<b>II</b>	Biology of Chordates	100	03	
			Practical - II	50	02	
<b>II</b>	<b>III</b>	<b>III</b>	Cell biology, Genetics and Evolution	100	03	
			Practical - III	50	02	
	<b>IV</b>	<b>IV</b>	Embryology, Physiology and Ecology	100	03	
			Practical - IV	50	02	
<b>III</b>	<b>V</b>	<b>V</b>	Animal Biotechnology	100	03	
			Practical - V	50	02	
		<b>VI</b>	Animal Husbandry	100	03	
			Practical - VI	50	02	
	*Any one Paper from A, B and C	<b>VII (A)*</b>	Immunology	100	03	
			Practical - VII (A)	50	02	
		<b>VII (B)*</b>	Cellular Metabolism and Molecular Biology	100	03	
			Practical - VII (B)	50	02	
	** Any one cluster from I, II and III	<b>VII (C)*</b>	Bioinformatics	100	03	
			Practical - VII (C)	50	02	
		Cluster VIII-A**	<b>Cluster Electives –VIII-A : Medical Diagnostics</b>			
			1. Clinical Biochemistry	100	03	
	2. Haematology		100	03		
	3. Clinical Microbiology		100	03		
	Practical – VIII: 1		50	02		
	Practical – VIII: 2		50	02		
Project Work	50	02				
Cluster VIII-B**	<b>Cluster Electives –VIII-B : Aquaculture</b>					
	1. Principles of Aquaculture	100	03			
	2. Aquaculture Management	100	03			
	3. Postharvest Technology	100	03			
	Practical – VIII: 1	50	02			
	Practical – VIII: 2	50	02			
Project Work	50	02				
Cluster VIII-C**	<b>Cluster Electives – VIII-C : Sericulture</b>					
	1. Gen. Sericulture, Mulberry cultivation and Management	100	03			
	2. Biology of Mulberry Silkworm and Silkworm rearing Technology	100	03			
	3. Silk Technology, Silk Marketing and Extension	100	03			
	Practical – VIII: 1	50	02			
	Practical – VIII: 2	50	02			
Project Work	50	02				

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w.e.f. 2015-16 (Revised in April, 2016)

ZOOLOGY SYLLABUS FOR I SEMESTER

ZOOLOGY - PAPER - I

ANIMAL DIVERSITY - NONCHORDATES

Periods:60

Max. Marks:100

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**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

2.2.1 General characters

2.2.2 Classification of Platyhelminthes upto classes with examples

2.2.3 *Fasciola hepatica* - External Characters, Excretory system, Reproductive System, Life History and pathogenicity

**Unit - III**

3.1 Nematelminthes

3.1.1 General characters

3.1.2 Classification of Nematelminthes 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

Max. Marks: 50

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#### 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, Zoa 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**

