

**KRISHNA UNIVERSITY**  
**STRUCTURE OF MODEL CURRICULUM FOR**  
**ZOOLOGY IN UNDERGRADUATE DEGREE PROGRAMME**  
**CBCS SYLLABUS SCHEDULE 2015-16**

S R. N O	YEAR	Sem ester	paper	TITLE	TEACHIN G HOURS WEEKLY	CREDIT S	EX. HOURS	MARKS/100		Total
								int	ext	
1	First year	I	Theory-I	Animal Diversity of invertebrates				25	75	100
2			Practical-I	Animal Diversity of invertebrates				25	75	100
								50	150	<b>200</b>
3		II	Theory-II	Animal Diversity of vertebrates				25	75	100
4	Practical- II		Animal Diversity of vertebrates				25	75	50	
							50	150	<b>200</b>	

**B.SC. FIRST YEAR SYLLABUS 2015**  
**ZOOLOGY SEMESTER I**  
**Paper - I**  
**ANIMAL DIVERSITY OF INVERTBRATES - I**

**Marks:- 75**

**Periods: 60Hours**

---

**UNIT I**

**10 hours**

- 1.0 Brief History, Significance Of Diversity Of Invertebrates
- 1.1 Phylum Protozoa:- General Characters And Outline Classification Upto Classes With Examples; Type Study: Elphidium,
- 1.3 Phylum Porifera:- General Characters And Outline Classification Upto Classes With Examples; Type Study: Sycon, Canal System In Sponges.

**UNIT II**

**16 hours**

- 2.0 Phylum Coelenterata :- General Characters And Outline Classification Upto Classes With Examples; Type Study: Aurelia ,Polymorphism In Coelenterates: Corals And Coral Reef Formation.
- 2.1 Phylum Platy helminthes :- General Characters And Outline Classification Upto Classes With Examples; Type Study: Fasciola hepatica.
- 2.2 Phylum Nematelminthes :- General Characters And Outline Classification Upto Classes With Examples.

**UNIT III**

**10 hours**

- 3.0 Phylum Annelida :- General Characters And Outline Classification Upto Classes With Examples; Type Study: Leech., Metamerism In Annelida.
- \*Vermiculture : Scope, Significance of Vermiculture Earthworms Sps, Processing of Vermiculture, Vermicompost, Economic Importance Of Vermicost.

**UNIT- IV**

**15 hours**

- 4.0 Phylum Arthropoda:- General Characters And Outline Classification Upto Classes

With Examples; Type Study: Macrobrachium rosenbergii (Scampi).

\*Peripatus-Structure ,Affinities

4.1 Phylum Mollusca:- General Characters And Outline Classification Upto Classes

With Examples.

\* Pearl Formation In Pelecypoda.

\*Torsion In Gastropoda.

#### UNIT-V

9 hours

5.0 Phylum Echinodermata: General Characters And Outline Classification Upto Classes  
With Examples; Water Vascular System Of Star Fish.

5.1 Invertebrates Larval Forms: Amphiblastula, Ephyra, Trochophora, Nauplius,  
Glochidium , Bipaneria .

5.2 Hemichordata: General Characters And Outline Classification Upto Classes  
With Examples; Balanoglossus:Structure , Affinities& Tornaria Larvae

**\*Modern Text Book Of Zoology Invertebrates ---- R.L. kotpal**

**\*A Text Book of Invertebrates. Arumugam et.al.,**

**\* Economic Zoology- Saras Publication**

**B.SC. FIRST YEAR SYLLABUS 2015**  
**ZOOLOGY SEMESTER II**  
**Paper - II**  
**ANIMAL DIVERSITY OF VERTBRATES - II**

**Marks:- 75**

**Periods: 60 Hours**

---

<b>UNIT-I</b>	<b>10hours</b>
1.0	Protochordates : Salient Features Of Urochordata And Cephalochordata
1.1	structure of Branchiostoma & affinities
1.2	Structure And Life- History Of Herdmania , Significance Of Retrogressive Metamorphosis.
1.3	General characters Of Chordates & Its Origin
<b>UNIT-II</b>	<b>12hours</b>
2.0	General Characters Of Cyclostomes, Difference Between The Petromyzon & Myxine.
2.1	General Characters Of Fishes , Classification Up To Sub-Class Level With Example.
2.2	Type Study - SCOLIODON : Morphology , Digestive System, Respiratory System , Circulatory System(Heart) , Nervous System (Brain). * Migration In Fishes and Types Of Scales, Dipnai fishes.
<b>UNIT-III</b>	<b>16 hours</b>
3.0	General Characters And Classification Of Amphibian Up To Order Level.
3.1	Type Study - RANA : Morphology , Digestive System , Respiratory System , Circulatory System (Heart), Nervous System (Brain)And Reproductive System. * Parental Care In Amphibians.
3.2	General Characters And Classification Of Reptilian Up To Order Level. Type Study – CALOTES : Morphology , Digestive System , Respiratory System , Circulatory System(Heart) , Nervous System(Brain) And Urinogenital System .

**UNIT-IV**

**12 hours**

- 4.0 General Characters And Classification Of Aves Up To subclass Level With Examples. Type Study-PIGEON (Columbia livia ) : Exoskeleton , Digestive System, Respiratory System , Circulatory System(Heart), Nervous System(Brain) And Excretory System.  
\* Significance Of Migration In Bird, Flight Adaptations In Birds.

**UNIT-V**

**10hours**

- 5.0 General Characters And Classification Of Mammalia Up To Sub-class Level With Examples. Type Study: RABBIT \* Dentition In Mammals.

**\*Modern text book of zoology vertebrates ---- R.L kotpal**

University Updates

**Sri Venkataswara University, Tirupati**  
**First year semester-I**  
**Zoology Revised Practical Syllabus paper –I**  
**(ANIMAL DIVERSITY OF INVERTEBRATES)**

**3hours / week**

**Animal Diversity of Invertebrates**

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

- Protozoa:** Elphidium, paramecium –Binary fission, Conjugation.
- Porifera:** Spongilla, Euspongia, Sycon, Sycon-L.S, T.S.
- Coelenterata:** Obelia colony, Medusa, Physalia, Velella, Corallium, Gorgonia, Aurelia, Pennatula.
- Platyhelminthes:** Planaria, Fasciola hepatica larval stages of Meracidum, Redia, Cercaria, Echinococcus granulosus.
- Nematehelminthes:** Ascaris Male & Female, Ancylostoma duodenale.
- Annelida:** Neries, Heteroneries, Aphrodite, Hirudo, Trochophore larva.
- Arthropoda:** Nauplius, Mysis, Zoea Larvae, Anopheles, culex, mouth parts (Male & Female). house fly mouth parts. Scorpion, Crab, Prawn, scolopendra, Sacculina, Limulus, Paripatus.
- 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 Dissections:**

Leech / Prawn/Scorpion/Crab Digestive system,  
Prawn Appendages ,  
Prawn/Scorpion/Crab Nervous System  
Pila/Unio Digestive System,  
Mounting of statocyst, Mounting of Radula.

- **Compulsory one species to be adopted for demonstration only by the faculty.**
- **Computer Aided Techniques as per U.G.C Guidelines.**

- **Laboratory record work shall be submitted at the time of Practical Examination.**

\*Each practical batch should not have more than 20 students

**Sri Venkataswara University, Tirupati**  
**First year semester-II**  
**Zoology Revised Practical Syllabus paper-II**  
**(Diversity of vertebrates)**

**3hours/week.**

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

**Protochordata:** Herdmania, Amphioxus, Amphioxus T.S. through Pharynx.

**Cyclostomata:** Petromyzon, Myxine.

**Pisces:** Pristis, Torpedo, Channa, Pleuronectes, Hippocampus, Exocoetus, Ehenis, Labeo, Catla, Clarius, Auguilla, Scales of fishes, Dipnai fishes.

**Amphibia:** Ichthyophis, Amblystoma, Siren, Axolotal larva, Hyla, Rachophous.

**Reptelia:** Draco, Chamaeleon, Uromastix, Russels viper, Naja, Krait, Enhydrina, Testudo, Trionyx, Crocodile.

**Aves:** Passer, Psittacula, Bubo, Alcedo, King fisher, Pigeon, corvus, peacock, Study of different types of feathers: Quill, Contour, filoplume, down.

**Mammalia:** Ornithorynchus, Tacheglossus Hedgehog, Pteropus, Funambulus, Manis, Loris.

**Osteology:** Appendicular skeletons of varanus, pigeon and Rabbit--- skull, Fore limbs, Hind limbs and Girdles

**Demonstration of dissection/dissected / Virtual Dissections:**

1. V, VII, IX, X Cranial Nerves of Shark/Locally available fishes.
2. Arterial system, Venous system of Shark/Calotes/fowl/rat.
3. Digestive system of fish.

- **Laboratory record work shall be submitted at the time of Practical Examination.**
- **Compulsory one species to be adopted for demonstration only by the faculty.**

University Updates

FIRST YEAR  
Zoology Model Theory Paper  
Semester - I  
Animal Diversity Of Invertebrates

Time:3hours  
Marks:75

Part-A (5X5=25)

Answer any five questions , each question carries five marks, draw diagrams wherever necessary.

- 1 ) slipper animal cule.
- 2) Tornaria Larvae
- 3) . Nephron
- 4) Pearl Formation
- 5) Scampi.
- 6) Diptera
- 7) Significance Of Polymorphism.
- 8) Balanoglossus

Part-B ( 5X10=50)

Answer five questions , each question carries Ten marks, draw diagrams wherever necessary.

- 9 (a) life history of elphidium-explain  
or  
(b) spicules in sponges-Explain.
- 10 (a) write an essay of fasciola life cycle.  
Or  
(b) general characters & classification upto classes with examples of coelenterate.
- 11 (a) write an essay on processing of vermiculture.  
Or  
(b) write the external characters of leech.
- 12 (a) write an essay on peripatus structure & affinities .  
Or  
(b) torsion in gastropoda-explain.
- 13 (a) write an essay on water vascular system in star fish.  
Or  
(b) general characters & classification of hemichordate.

\*\*\*\*\*

FIRST YEAR  
Zoology Model Theory Paper  
Semester - II  
Animal Diversity Of vertebrates

Time:3hours

Marks:75

Part-A (5X5=25)

Answer any five question , each question carries five marks, draw diagrams wherever necessary.

- 1) Amphioxus
- 2) Placoid scale
- 3) . Quill feather
- 4) Prototheria
- 5) Significance Of Fish Migration
- 6) Draco
- 7) Emu
- 8) Apoda

Part-B (5X10=50)

Answer five questions , each question carries ten marks, draw diagrams wherever necessary.

- 9 (a) life history of Herdmania-explain  
or  
(b) Explain the origin & general characters of chordates.
- 10 (a) difference between the petromyzon & myxine  
Or  
(b) describe the arterial system of shark..
- 11 (a) write an essay on parental care in amphibian.  
Or  
(b) External characters of calotes.
- 12 (a) write an essay on flight adaptations in bird .  
Or  
(b) Respiratory system of pigeon -explain.
- 13 (a) write an essay on Dentition in mammals .  
Or  
(b) general characters of Rabbit .

\*\*\*\*\*