

**SRI VENKATESWARA UNIVERSITY : : TIRUPATHI**

**MODEL CURRICULUM FOR ZOOLOGY IN UNDERGRADUATE DEGREE  
PROGRAMME CBCS SYLLABUS SCHEDULE 2015-2016**

**ZOOLOGY SYLLABUS FOR II SEMESTER  
ZOOLOGY –PAPER-II (THEORY)  
ANIMAL DIVERSITY –CHORDATES**

PERIODS- 60

MAX. MARKS -100

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**UNIT-I**

- 1.1 General Characters of Chordates and its origin
- 1.2 Protochordata : Sailer Features
- 1.2.1 Structure and life history of Herdmania
- 1.2.3 Significance of Retrogressive metamorphosis
- 1.2.4 Structure and affinities of Amphioxus.

**UNIT-II**

**2.1 Cyclostomata**

- 2.1.1 General characters of Cyclostomes
- 2.1.2 Difference between petromyzon and myxine

**2.2 Fishes**

- 2.2.1 General Characters of Fishes
- 2.2.2 Classification of fishes up to sub-class level with examples
- 2.2.3 Scoliodon-External features , Digestive system, Respiratory system, Heart, aortic arches, Brain.
- 2.2.4 Migration in fishes
- 2.2.5 Types of scales
- 2.2.6 General account of dipnoi

## UNIT-III

### 3.1 Amphibia

3.1.1 General characters of Amphibia

3.1.2 Classification of Amphibia upto orders with suitable examples

3.1.3 Rana hexadactyla-External features, Digestive system, Respiratory system, Heart, Arterial system and Brain.

3.1.4 Parental care in Amphibia

### 3.2 Reptelia

3.2.1 General Characters of Reptelia

3.2.2 Clasification of Reptelia upto orders with examples

3.2.3 Skull in Reptiles.

## UNIT-IV

### 4.1 Aves

4.1.1 General Characters of Aves

4.1.2 Classification of Aves upto sub-classes with examples

4.1.3 Columba livia-External features, Digestive System, Respiratory systems, Heart,

Arterial system(Double Circulation)Brain

4.1.4 Migration of Birds

4.1.5 Flight adaptations in Birds

4.1.6 Brief account of Archaeopteryx

## UNIT-V

### 5.1 Mammalia and Zoogeography

5.1.1 General Characters of mammalia

5.1.2 Classification of Mammalia up to sub classes with examples

5.1.3 Dentition in Mammals

### 5.2. Zoogeography

5.2.1 Characteristics and fauna of Oriental region, Australian Region, Ethiopian Region

## **SUGGESTED READINGS**

1. **E.L.jordan and P.S Verma** ‘ Chordate Zoology’ -S .Chand Publications
2. **Mohan P Arora** ‘**Chordata** –I,Himalaya Publishing House Pvt.ltd.
3. **Marshal, Parker and Haswell** ‘Text book of vertebrates.’ ELBS and Mc Millan , England .
4. **Alfred Sherwood Romer**. Thomas S Pearson’ The Vertebrates body, Sixth edition, CBS college publishing Saunders College Publishing.
5. **George C.Kent,Robert K Carr**. Comparative Anatomy of the Vertebrates,9<sup>th</sup> ed. Mc Graw Hill.
6. **Kenneth Kardong Veretbrates** : Comparative Anantomy Function and Evolution,4<sup>th</sup> ed, ‘McGraw Hill.
7. **J.W.Young** The life of Vertebrates , 3<sup>rd</sup> ed, Oxford University Press.
8. **Harvey Pough F, Christine M Janis, B Heiser**, Vertebrate Life, Pearson 6<sup>th</sup> ed, pearson Education Inc. 2002.
9. **R.L Kotpal**, Modern text book of Zoology, Rastagi Publications.
- 10.**Pandey & Sukla** Fish and fishers 2<sup>nd</sup> Ed. Rastagi Publications.

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**Dr. Md Azhar Baig**  
**BOS Chairman**

**SRI VENKATESWARA UNIVERSITY : : TIRUPATHI**  
**ZOOLOGY PRACTICAL SYALLABUS FOR II SEMESTER**  
**ZOOLOGY –PAPER-II (Practical)**  
**ANIMAL DIVERSITY –CHORDATES**

**Periods-30**

**Max. Marks-50**

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Observation of the following Slides/Spotters/Models.

Protochordata : Herdmania , Amphioxus, Amphioxus T.S Through Pharynx

**Cyclostomes** : Petromyzon, Myxine

**Pisces** : Labeo rohita, Catla, Channa, Clarius, Hippo Campus,  
Exocoetus, Echeneis, Anguilla, Pristis, Tarpedo,  
Protapterous (Dipnoi fish)

**Fish Scales-** Placoid, Cycloid, Ctenoid Scales

**Amphibla** : Hyla , Rachophorus, Ichthyophis, siren, Amblystoma,  
Axolotal

Larva.

**Reptelia** : Chamaeleon, Uromastix, Draco, Trionix, Naja, Bungarus,  
Enhydrina, Russels viper , Crocadilus.

**Aves** : Passer, Psittacula , Bubo, Allcedo, Columba, Carvas, Pavo  
cristatus, Collection and study of different feathers- quill,  
contour, Filopluma , down .

**Mammalia** : Ornithorhyncus, Tachyglossus, hedgehog, Loris, Manis.

**Osteology** : Appendicular Skelton of Pigeon, rabbit-Skull,  
Forelimbs, Hind Limbs , Pectoral and pelvic girdles.

**Demonstration of dissection/ Dissected/ Virtual dissection.**

1. Cranial Nerves : V,VII,IX,X cranial nerves of shark or locally available fish
2. Arterial system of Shark/Calotes/Fowl/Rat
3. Digestive System of Fish

❖ Certified Laboratory record should be submitted at the time of Practical examination.

**Dr. Md Azhar Baig**  
**BOS Chairman**

**SRI VENKATESWARA UNIVERSITY : : TIRUPATHI**  
**ZOOLOGY MODEL PRACTICAL EXAMINATION FOR II SEMESTER**  
**ZOOLOGY –PAPER-II (Practical)**  
**ANIMAL DIVERSITY –CHORDATES**

**TIME-2 Hrs**

**Max. Marks-50**

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1. Identify the given dissection and Draw a labeled diagram 10M
  
2. Identify and comment on the following spotters and draw Labeled drawing  
A, B, C, D, E, F, G (One each from Prochordates, Fishes, Amphibia  
Reptiles , Aves , and Osteology) 6 X5 = 30 M
  
3. Certified Practical record 10 M

Without Practical record –Student is not admitted for exam

Spotters

Identification	}	1 M
Classification		
Labeled Diagram		-2 M
Comments		- 2 M

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**SRI VENKATESWARA UNIVERSITY : : TIRUPATHI**  
**ZOOLOGY MODEL QUESTION PAPER FOR II SEMESTER**  
**ZOOLOGY –PAPER-II(THEORY)**  
**ANIMAL DIVERSITY –CHORDATES**

**TIME-3Hrs**

**Max. Marks-75**

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**PART-A**

**I. Answer any Five of the following** **5X5=25**  
**Each question carry 5 marks**

1. General Charcters of Urochordates
2. Dipnoi fishes
3. Types of scales in fishes
4. Skull in reptiles
5. Migration in Birds
6. Urodela
7. Archaeopteryx
8. Prototheria

**PART-B**

**II. Answer any five questions .each question carry 10.marks** **10X 5=50**

9. Give an Account of Structure and affinities of Amphioxus.  
Or  
Describe life history of Herdmania with an emphasis on Retrogressive.  
metamorphosis .
10. Write an essay on Migration of fishes.  
Or  
Give on account of Arterial System in shark

11. Classify Amphibia upto orders with Suitable examples

Or

Write an essay on Parental care in Amphibia.

12. Flight Adaptations in Birds

Or

Characters and Classification of Aves upto Sub-classes

13. Write an essay on Dentition in Mammals

Or

Describe the fauna of Australian Region

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**Dr. Md Azhar Baig**  
**BOS Chairman**