

SRI VENKATESWARA UNIVERSITY, TIRUPATHI

W.E.F. 2016-17

ZOOLOGY SYLLABUS FOR II SEMESTER

ZOOLOGY - PAPER-II (THEORY)

ANIMAL DIVERSITY - CHORDATES

PERIODS - 60

MAX. MARKS - 100

### UNIT-1 (PROTOCHORDATA)

- 1.1. Origin of Chordata.
- 1.2. Chordata: Distinctive Features & Classification of up to class level.
- 1.3. Protochordata : Sailer Features
- 1.4. Herdmania; Structure, Life History & Retrogressive Metamorphosis.

### UNIT-2: CYCLOSTOMATA & FISHES

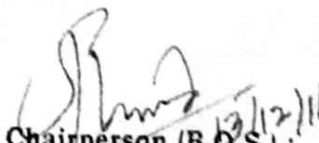
- 2.1. Cyclostomata: General characters & Difference between Petromyzon and Myxine
- 2.2. Fishes: General Characters & Classification up to sub-class level with examples
- 2.3. Migration of Fishes
- 2.4. Types of Scales in Fishes

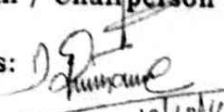
### UNIT-3: AMPHIBIA & REPTILIA

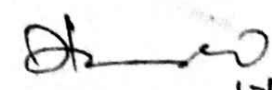
- 3.1 Amphibia: General characters & Classification up to the level of order with examples
- 3.2. Type Study: *Rana hexadactyla*: External Features, Skeleton System (Skull, Girdles and Limb bones only), Digestive System, Respiratory System, Heart, Arterial System, Venous System and Central Nervous System (Brain & Spinal cord).
- 3.3. Reptelia: General Characters & Classification up to the level of order with examples.

Signature of the Chairman / Chairperson (B.O.S.):

Signature of the Members:

  
13/12/16

  
13/12/16

  
12/12/16

## UNIT-4 (AVES)

- 4.1 Aves: General Characters & Classification up to sub-class level with examples
- 4.2. Type Study: *Columba livia* - External Features, Digestive System, Respiratory systems, Heart and Double Circulation (Systemic and Pulmonary Circulations).
- 4.3. Migration of Birds.
- 4.4. Flight adaptations in Birds
- 4.5. Evolutionary Significance of Archaeopteryx.

## UNIT-5 (MAMMALIA & ZOOGEOGRAPHY)

- 5.1 Mammalia: General Characters & Classification up to sub class level with examples
- 5.2. Dentition in Mammals
- 5.3. Geographical Features of Oriental Region & its Fauna.
- 5.4. Geographical Features of Australian Region & its Fauna.
- 5.5. Geographical Features of Ethiopian Region & its Fauna.

## 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.

\*\*\*

Signature of the Chairman / Chairperson (B.O.S.):

Signature of the Members:

13/12/16

12/12/16

**SRI VENKATESWARA UNIVERSITY : : TIRUPATHI**  
**ZOOLOGY PRACTICAL SYALLABUS FOR II SEMESTER**  
**ZOOLOGY -PAPER-II (Practical) - W.E.F. 2016-17**  
**ANIMAL DIVERSITY -CHORDATES**

Periods-30

Max. Marks-50

Observation of the following Slides/Spotters/Models/Handouts.

Protochordata : ✓ Herdmania, Amphioxus.

Cyclostomes : ✓ Petromyzon, Myxine

Pisces : ✓ Labeo rohita, ✓ Catla, ✓ Channa, ✓ Clarius, ✓ Hippo Campus,  
 ✓ Exocoetus, ✓ Echeueis, ✓ Anguilla, ✓ Pristis, ✓ Tarpedo,  
 ✓ Protopterus or any one Dipnoi Fish.

Fish Scales- ✓ Placoid, ✓ Cycloid, ✓ Ctenoid Scales

Amphibia : ✓ Hyla, ✓ Rhyacophorus, ✓ Icthyophis, ✓ siren, ✓ Amblystoma,  
 ✓ Axolotal Larva.

Reptilia : ✓ Chamaeleon, ✓ Uromastix, ✓ Draco, ✓ Trionix, ✓ Naja,  
 ✓ Bungarus, ✓ Enhydrina, ✓ Russels viper, ✓ Crocadilus.

Aves : ✓ Passer, ✓ Columba,  
 Collection and study of different feathers (Quill,  
 Contour, Filoplume & Down) of Columba.

Mammalia : ✓ Ornithorhynchus, ✓ Tachyglossus, ✓ hedgehog, ✓ Loris, ✓ Manis.

Osteology : ✓ Skelton of Frog or Pigeon - ✓ Skull, ✓ Pectoral girdle,  
 ✓ Pelvic girdles, ✓ Fore & Hind Limb bones.

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

1. Arterial system of Frog / Calotes / Bird / Rat.
2. Venous System of Frog / Calotes / Bird / Rat.
3. Digestive System of Frog / Calotes / Bird / Rat.

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

Signature of the Chairman / Chairperson (B.O.S.) :

Signature of the Members:

*[Signature]*  
13/12/16

*[Signature]*  
13/12/16

*[Signature]*  
13/12/16

**SRI VENKATESWARA UNIVERSITY : TIRUPATHI**  
**ZOOLOGY MODEL QUESTION PAPER FOR II SEMESTER**  
**ZOOLOGY - PAPER-II (THEORY) - W.E.F. 2016-17**  
**ANIMAL DIVERSITY - CHORDATES**

TIME-3Hrs

Max. Marks-75

**PART-A**

- I. Answer any Five of the following  
Each question carry 5 marks

5X5=25

1. General Characters of Urochordates
2. Placoid Scale
3. Types of scales in fishes
4. Frog Skull
5. Migration of Birds
6. Urodela
7. Archaeopteryx
8. Prototheria

**PART-B**

- II. Answer any five questions .each question carry 10.marks

10X 5=50

9. List three distinctive features of chordates and explain the origin of chordata..

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 Frog

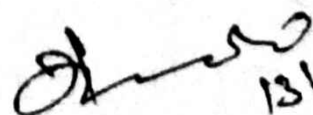
11. Classify Amphibia up to orders with Suitable examples

Or

Signature of the Chairman / Chairperson (B.O.S.):

Signature of the Members:

  
13/12/16

  
13/12/16

Classify the class reptilia up to the level of order list their features and give examples.

12. Give an account on flight adaptations in birds

Or

List the general characters of birds and classify them up to Sub-class level and give examples.


13. Write an essay on Dentition in Mammals

Or

Describe the geographical features of Australian Region and give an account on its fauna.

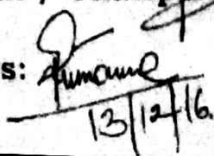
\*\*\*

Signature of the Chairman / Chairperson (B.O.S.):

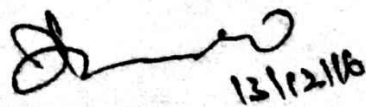


13/12/16

Signature of the Members:



13/12/16



13/12/16

6

**SRI VENKATESWARA UNIVERSITY : TIRUPATHI**  
**ZOOLOGY MODEL PRACTICAL EXAMINATION FOR II SEMESTER**  
**ZOOLOGY - PAPER-II (Practical) - W.F.F. 2016-17**  
**ANIMAL DIVERSITY - CHORDATES**

**TIME-2 Hrs**

**Max. Marks-50**


1. Identify the given dissection and Draw a labeled diagram 10 Marks
2. Identify, write identification points & draw labeled diagrams of the following  
spotters.  
A, B, C, D, E, F, G (One each from Prochordates, Fishes, Amphibia  
Reptiles, Aves, and Osteology) 6 X 5 = 30 M
3. Certified Practical record 10 M  
Without Practical record - Student is not admitted for exam

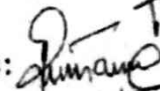
**Spotters**

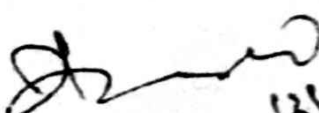
- |                 |   |       |
|-----------------|---|-------|
| Identification  | } | 1 M   |
| Classification  |   |       |
| Labeled Diagram |   | - 2 M |
| Comments        |   | - 2 M |

**Signature of the Chairman / Chairperson (B.O.S.):**

**Signature of the Members:**

  
12/12/16

  
18/12/16

  
12/12/16