

Syllabus of BSc 2nd Semester (FYUGP) Zoology

Paper Name: DIVERSITY OF CHORDATES

Code: ZLG4200104

Credit: 3 (T) + 1 (P)

THEORY

Topics	Allotted faculty
Origin of Chordates-Dipleurula concept and Echinoderm theory General characteristics and outline classification General characteristics and classification of Reptilia Biting mechanism in snakes; Flight adaptation in birds;	DD
General characteristics of Hemichordata, Urochordata and Cephalochordata Study of larval forms of protochordates. Overview of axial and appendicular skeleton, Jaw suspensorium, Visceral arches Origin of Tetrapoda Migration in Fishes; Archaeopteryx as a connecting link	NKD
Advanced features of vertebrate over protochordata General characteristics and classification of cyclostomes up to class General characteristics of Chondrichthyes and Osteichthyes, classification up to order. General characteristics and classification of Amphibia, Aves and Mammalia up to order Parental care in Amphibia; Affinities in Prototheria.	RL

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PRACTICAL

Experiments	Allotted faculty
Study of museum specimens/ Models - Protochordata (<i>Balanoglossus</i> , <i>Herdmania</i> , <i>Amphioxus</i>), Study of T.S. of <i>Amphioxus</i> through pharyngeal, intestinal and caudal regions. PowerPoint presentation on the study of any two vertebrates from two different classes by students	NKD
Study of museum specimens/ Models - Agnatha (<i>Petromyzon</i> , <i>Myxine</i>), Fishes (<i>Scoliodon</i> , <i>Torpedo</i> , <i>Mystus</i> , <i>Heteropneustes</i> , <i>Labeo</i> , <i>Hippocampus</i> , <i>Tetraodon</i>), Amphibia (<i>Ichthyophis</i> , <i>Necturus</i> , <i>Bufo</i> , <i>Hyla</i>), Aves (ten different species of birds commonly found in Assam),	RL
Study of museum specimens/ Models – Reptilia (<i>Chelone</i> , <i>Hemidactylus</i> , <i>Varanus</i> , <i>Chamaeleon</i> , <i>Bungarus</i> , <i>Naja</i>), Mammalia (Bat, common primates, common ungulates, Gangetic River Dolphin). Identification key of venomous and non-venomous snakes	DD

Suggested Readings:

1. Young, J. Z. (2004). The Life of Vertebrates. 3rd Edition. Oxford University press.
2. Pough F. H. & Janis, C. M. (2018). Vertebrate Life. 10th Edition, Sinauer Associates
3. Verma, P. S. & Jordan, E. L. (2013). Chordate Zoology. 14th edition, S. Chand
4. Kotpal, R. L. (2019). Modern text book of Zoology: Vertebrates (Z-3). 5th edition, Rastogi Publications