

**ORIENTAL COLLEGE (AUTONOMOUS), TAKYEL,
IMPHAL
TEACHING PLAN
(B.A/B.Sc.)**

**Name of Department: Zoology
Semester – 3rd Semester- 2023-24.**

Paper Name: DIVERSITY OF CHORDATA Code: Zoo HC 601

No. of Hours per Week	Credits	Total No. of Hours	Marks
4	4	60	75

Learning Objectives:

- To introduce to the students the diversification of species of chordate world and evolutionary relationship among them
- To assist them in knowing the basic characters of the different classes of the phylum Chordata.
- To acquaint the students advance and adaptation of various types of vertebrates.

Learning Outcomes:

Upon completion of this course the students will be able to

- Get acquainted with the knowledge of diversity and ecological role of Chordates.
- Understand the physiological and anatomical peculiarities through type study.
- Enhance their knowledge of various animals and their relationship

ZOO-HC- 601 : Diversity of Chordata						
Unit	Section	Topic	Hours	Learning outcome/ CO addressed	Pedagogy	Assessment
1	Introduction to Chordates					
	1.	General characteristics and outline classification of chordate	2	Recalled the characters and classification of Chordata	Lecture, PowerPoint	Objective test and short answer
	2	Dipleurula concept and the Echinoderm theory of origin of chordates	3	Learnt how the chordate originated	-Do-	Seminar assignment
	3	Advanced features of vertebrates over Protochordata	2	Understand the different between protochordata and vertebrates	PPT	MCQ, Q and A session and short answer
	4	General characteristics of Hemichordata, Urochordata and Cephalochordata	3	Recalled the characters of Protochordata	Lecture and PPT	Objective test and classroom interaction.
	5	Study of larval forms in protochordates; Retrogressive metamorphosis in Urochordata	3	Understand the importance of Retrogressive, metamorphosis and larval forms	Lecture, PPT and Picture	MCQ, Seminar Assignment
2	Agnatha, Pisces					
	1	General characteristics and	2	Recalled the salient features and classification	Lecture, PPT and Table	Short answer, quiz, Objective

		classification of cyclostomes upto classes				test question
	2	General characteristics of Chondrichthyes and Osteichthyes classification up to order	3	Learnt about the characters and classification of Pisces	Lecture, PPT and chart	MCQ, short answer and Group discussion
	3	Migration Osmoregulation and Parental care in fishes	4	Explored the movement of fishes and explain the caring of their young ones	Lecture, PPT and Photograph	Seminar, Assignment , Group discussion
3	Amphibiaand Reptilia					
	1	Origin of Tetrapoda (Evolution of terrestrial ectotherms	3	Knowledge about the origin of Amphibia from fish	PPT and Lecture	MCQ Assignment , Seminar, Quiz and short answer.
	2	General characteristics and classification up to order	2	Recalled the characters and classification	PPT and Lecture	MCQ Assignment , Seminar, Quiz and short answer.
	3	Parental care in Amphibians	2	Laernt the caring of young ones	Photograph, PPT	MCQ Assignment , Seminar, Quiz and short answer.
	4	General characteristics and classification up	2	Knowledge the different characters in different order	Lecture and PPT	MCQ Assignment , Seminar, Quiz and short answer.

		to order				
	5	Affinities of <i>Sphenodon</i> ; Poison apparatus and Biting mechanism in snakes.	3	Studied the relatedness of <i>Sphenodon</i> with other groups of Reptiles. Learnt snake biting mechanism	Diagram, Lecture and PPT	MCQ Assignment, Seminar, Quiz and short answer.
4	Aves and Mammalia					
	1	General characteristics and classification up to order	3	Recalled the characters and classification	Lecture and PPT	MCQ, short answer, Quiz, Seminar Assignment
	2	<i>Archaeopteryx</i> - a connecting link; Principles and aerodynamics of flight	3	Learnt about the Avian and Reptilian characteristic in <i>Archaeopteryx</i>	Lecture, PPT and Picture	
	3	Flight adaptations and Migration in birds	4	Knowledge of movement of birds	Photograph, PPT, Lecture and Video	
	4	General characters and classification of Mammalia up to order	3	Learnt Mammalian characters and its classes	Lecture and PPT	
	5	Affinities of Prototheria; Adaptive radiation with reference to locomotory appendages.	3	Understand the Affinities of Prototheria	Diagram and PPT	
5	Zoogeography					

	1	Zoogeographical realms, Theories pertaining to distribution of animals	4	Learnt the different Zoogeographical Regions of the world	Lecture, PPT and Maps	Objective test, Assignment and seminar
	2	Plate tectonic and Continental drift theory, distribution of vertebrates in different realms.	6	Learnt the distribution of vertebrates in different realms	Maps, PPT and Lecture	

SUGGESTED READINGS

- Young, J. Z. (2004). The Life of Vertebrates. III Edition. Oxford university press.
- Pough H. Vertebrate life, VIII Edition, Pearson International.
- Darlington P.J. The Geographical Distribution of Animals, R.E. Krieger Pub Co.
- Hall B.K. and Hallgrimsson B. (2008). Strickberger's Evolution. IV Edition. Jones and Bartlett Publishers Inc.

Name of teachers :

- 1) Prof. R. K. Rajeshwari Devi
- 2) K. Uma Devi
- 3) Dr. L. Chitra Devi
- 4) Dr. H. Binota Devi