



बिरसा मुंडा ट्रायबल युनिवर्सिटी

Birsa Munda Tribal University

राजपिपला, जि. नर्मदा Rajpipla, Dist. Narmada

Established by Tribal Development Department, Govt. of Gujarat

School of Science

B.Sc. (Zoology) Programme

Subject Code & Name: BS01MJZOO2 Chordates-I

Teaching and Evaluation Scheme:

Teaching Scheme				Examination Scheme			
Credits				Component Weightage			
				CCE		SEE	
L	T	P	Total	TH	PWE	TH	PWE
3	-	1	4	37.5 %	12.5 %	37.5 %	12.5 %

Programme Name	B.Sc. Zoology
Semester	I
Course Code	BS01MJZOO2
Course Title	Chordates – I
Course Content Type (Th./Pr.)	Theory + Practical
Course Credit	3 + 1
Sessions + Lab. Per Week	3 + 2
Total Teaching/Lab. Hours	45 Theory Hours + 30 Practical Hours
* 2 Laboratory = 1 Session	

Learning Objectives

- The student receives training and skills in the basics of zoology, understands the complex interactions of different living organisms.

Prerequisites (if any)

- Student must know about different strata and hierarchy of taxonomy.
- Student must aware about specific terms used for animal organ and organ systems.

Learning Outcomes

On the Completion of this course, students will able to:

- Students were able to learn about the taxonomy and diversity of different classes of animals.
- Students will learn about morphology and organ systems of primitive animal.





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Detailed Contents		
UNIT	TOPIC/SUB-TOPIC	TEACHING HOURS
I	<p>Scheme of Classification of group Protochordata to class Cyclostomata.</p> <ol style="list-style-type: none">1. Comparison of Chordates with Non- Chordates.2. Classification outline of Subphylum: Cephalochordata.<ul style="list-style-type: none">• General characters of Cephalochordates.• Brief details of Amphioxus.• Affinities of Cephalochordata.3. Classification outline of Subphylum: Urochordata.<ul style="list-style-type: none">• General characters of Urochordata.• Brief details of Ascidian, Doliolum and Salpa.4. Classification outline of Class: Cyclostomata.<ul style="list-style-type: none">• General characters of Cyclostomes.• Brief details of Lamprey and Hagfish.	15
II	<p>Scheme of Classification of Super class Pisces to class Amphibia.</p> <ol style="list-style-type: none">1. Classification outline of Super class: Pisces.<ul style="list-style-type: none">• General characters of class Placodermi, Chondrichthyes and Osteichthyes.• Difference between Chondrichthyes and Osteichthyes.• Brief details of Sting ray fish, Electric ray fish, Catla, Rohu and Hippocampus.• Types of scales and fins in fishes.2. Classification outline of class: Amphibia.<ul style="list-style-type: none">• General characters of amphibians.• Brief details of Ichthyophis, Salamander and Hyla.• Hibernation and Aestivation.• Neoteny (Types and affecting factors).	15





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III	<p>General Morphology and Functional Anatomy: <i>Amphioxus</i> (Lancelet)</p> <ul style="list-style-type: none">• Habits and Habitat.• External features and Body wall.• Digestive system.• Respiratory system.• Blood vascular system.• Excretory system.• Reproductive system.	15
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Unit - IV Practical(s)

30 Hours

1. To study the classification of group Protochordata to class Cyclostomata with examples.
- *Ascidia, Doliolum, Salpa, Amphioxus, Lamprey and Hagfish.*
2. To study the classification of super class Pisces up to class with examples.
- *Sting ray, Electric ray, Rohu, Catla, Sea horse, Sucker fish and Eel.*
3. To study the classification of class Amphibia up to sub – class with examples.
- *Ichthyophis, Salamander and Hyla.*
4. To study the types of scales and fins of Fishes.
5. To study the external features and body wall of Amphioxus.
6. To study the digestive system of Amphioxus.
7. To study the blood vascular system of Amphioxus.
8. To study the reproductive system of Amphioxus.

Text Book(s)

1. Chordate Zoology by E. L. Jordan & P. S. Verma
2. Modern textbook of Zoology – Vertebrate Zoology by R. L. Kotpal
3. Practical Zoology – Vertebrates by S. S. Lal
4. A Manual of Practical Zoology – Chordates by P. S. Verma





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Reference Books

1. Nirav College Zoology – 202 for B.Sc. Students by Mihir Suthar, Haresh Patel and Kamlesh Shah.
2. A Manual of Zoology- Vol. I &II by Ayyar and Ananthakrishnan.
3. Chordate Zoology by Dhami and Dhami.
4. A Textbook of Vertebrate Zoology by Prasad and Kashyap.
5. A Text Book of Chordates (Saras Publication) by Arumugam.

L:: Lecture, **T::** Tutorial , **P::**Practical

CCE::Continuous and Comprehensive Evaluation

(CCE Theory includes Mid Semester Examination, Assignment, MCQ quizzes, Seminar, Reflective notes, class participation, case analysis and presentation; slip tests (announced/ surprised), attendance etc. or any combination of these)

PWE::Practical Work Examination

(PWE includes Laboratory practical work, project work, viva simulation exercise work etc.)

SEE::Semester End Evaluation

