



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: BS02MJZOO2 Chordates – II

Teaching and Evaluation Scheme:

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

Programme Name	B.Sc. Zoology
Semester	II
Course Code	BS02MJZOO2
Course Title	Chordates – II
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 class Reptilia to class Aves.</p> <ol style="list-style-type: none">1. General character of Super class tetrapoda.2. Classification outline of class: Reptile.<ul style="list-style-type: none">• General characters of Reptile.• Brief details of Giant turtle, Tuatara, Common house lizard, Horned toad, Chameleon, Rat snake.• Origin of Reptiles• Study of identification key for venomous and non-venomous snakes.• Common venomous and non-venomous snakes of Gujarat.3. Classification outline of class: Aves.<ul style="list-style-type: none">• General characters of class Aves.• Brief details of Stork, Peacock, Kingfisher, Crow, Parakeet and Owl.• Origin and affinities of Birds.• Adaptation of beak and feet in Birds.	15
II	<p>Scheme of Classification of class Mammals and general topics.</p> <ol style="list-style-type: none">1. Classification outline of class: Mammals up to Infra class.<ul style="list-style-type: none">• General characters of Mammals.• Brief details of Hedgehog, Flying fox, Human, Dog, Blue whale, Dugong, Squirrel and Elephant.• Origin of Mammals.• Hibernation and Aestivation.• Aquatic mammals and Adaptations.• Dentition in mammals.	15





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III	<p>General Morphology and Functional Anatomy: Garden Lizard (<i>Calotes versicolor</i>)</p> <ul style="list-style-type: none">• External characters• Digestive System• Circulatory system (Heart, Arterial system and Venous)• Respiratory system• Nervous system (Brain and cranial nerves)• Sense organs (Refer <i>Uromastix</i>)• Urinogenital system	15
Unit – IV Practical(s)		30 Hours
<ol style="list-style-type: none">1. To study the classification of class Reptile up to subclass with examples. - <i>Giant turtle, Tuatara, Common house lizard, Horned Toad, Chameleon, Rat snake and Sea snake.</i>2. To study the classification of Aves up to subclass with examples. - <i>Stork, Pelican, Goose, Kite, Peacock, Pigeon, Cuckoo, Parakeet, Owl, Swift, Kingfisher, Woodpecker, Crow, Crane, Red-wattled lapwing.</i>3. To study the classification of class Mammals up to subclass with examples. - <i>Hedge Hog, Flying fox, Human, Dog, Blue whale, Donkey, Blue bull, Elephant, Dugong, Squirrel, Indian Hare and Scaly anteater.</i>4. To study of identification key for venomous and non-venomous snakes.5. To study the adaptation of beak and feet in Birds6. To study the external characters of <i>Calotes</i>.7. To study the digestive system of <i>Calotes</i>.8. To study the arterial system of <i>Calotes</i>.9. To study the dorsal and ventral view of brain of <i>Calotes</i>.10. To study the urinogenital system of male and female <i>Calotes</i>.		





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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

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

