

**SHRI GOVIND GURU UNIVERSITY, GODHRA**  
**B.Sc. ZOOLOGY - SEMESTER-IV**  
**MINOR COURSE - THEORY**  
**BS23MN4ZO1**  
**(Diversity of Chordates)**

**Total Credit - 02**

**02 Lectures/Week**

UNIT	TOPICS	CREDIT	HOURS
<b>Unit-I</b>	<ul style="list-style-type: none"> <li>• General characters of Protochordata, Cyclostomata, Pisces and Amphibia</li> <li>• Differences between Chondrichthyes and Osteichthyes</li> <li>• Swim bladder in Fishes</li> <li>• Accessory respiratory organs in Fishes</li> <li>• Parental care in Fishes</li> <li>• Parental care in Amphibians</li> <li>• Neoteny in Amphibians</li> </ul>	<b>1</b>	<b>15</b>
<b>Unit-II</b>	<ul style="list-style-type: none"> <li>• General characters of Reptilia, Aves and Mammalia</li> <li>• Temporal fossae in Reptiles</li> <li>• Identification of venomous and non-venomous snakes               <ul style="list-style-type: none"> <li>- Venomous: Russel's viper, Krait, Cobra, King Cobra, Marine Snake</li> <li>- Non-venomous: Boa, Python, Rat snake</li> </ul> </li> <li>• Types of snake venom (Neurotoxic, Haemotoxic)</li> <li>• Dinosaurs (Brontosaurus, Triceratops, Tyranosaurus, Dimetrodon, Stegosaurus, Pteranodon, Ichthyosaurus, Iguanodon)</li> <li>• Animal adaptations: Cursorial, Fossorial, Arboreal, Volant, Desert, Deep sea</li> </ul>	<b>1</b>	<b>15</b>

**References:**

1. Textbook of Vertebrates, R.L. Kotpal, Rastogi Publication, Meerut.
2. Chordate Zoology, P. S. Dhami, and J. K. Dhami, S. Chand & Co., Delhi.
3. Jordan E. L. and Verma P. S. Vertebrate Zoology, S. Chand publishing. New Delhi.

**SHRI GOVIND GURU UNIVERSITY, GODHRA**  
**B.Sc. ZOOLOGY - SEMESTER-IV**  
**MINOR COURSE - Practical**  
**BS23MN4ZO1**  
**(Diversity of Chordates)**

**Total Credit - 02**

**LIST OF PRACTICALS**

- I.** Study by charts/models/specimens to learn peculiarities of:
1. Swim bladder in Fishes
  2. Accessory respiratory organs in Fishes
  3. Parental care in Fishes (Male Hippocampus, Male Kurtus, Male Arius, Female Tilapia).
  4. Parental care in Amphibians (Alytes, Pipa, Rhacophorus, Hyla, Rhinoderma).
- II.** Study by charts/models/specimens to learn peculiarities of:
1. Temporal fossae
  2. Identification of venomous and non-venomous snakes by charts:
    - Venomous: Russel's viper, Krait, Cobra, King Cobra, Marine Snake
    - Non-venomous: Boa, Python, Rat snake
  3. Dinosaurs (Brontosaurus, Triceratops, Tyrannosaurus, Iguanodon, Stegosaurus, Pteranodon, Ichthyosaur, Plesiosaur)
  4. Animal adaptations:
    - i. Cursorial: Ostrich, Horse
    - ii. Arboreal: Squirrel, Hyla, Chameleon
    - iii. Volant: Bat, Birds
    - iv. Desert: Phrynosoma, Camel
    - v. Deep sea: Blue whale, Sole fish