

SARDAR PATEL UNIVERSITY
B.Sc. Zoology Semester II
Effective from June 2023

Course Code	US2MAZOO01 (T)	Title of the Course	Animal Diversity and Physiology-2
Total Credits of the Course	04	Hours per Week	04

Unit	Description
1	General characteristics and outline classification of Lower Vertebrates Comparative account of Hemichordata, Urochordata, Cephalochordata and Protochordata Type Study: <i>Scoliodon</i> Migration of Fishes with examples Parental care in fishes
2	General characteristics and outline classification of Higher Vertebrates Parental care in amphibians Neoteny, Paedogenesis and economic importance of Amphibians Identification of poisonous and non-poisonous snakes Mesozoic Reptiles and Dinosaurs
3	Migration of Birds – types, causes and significance Flightless and Flying adaptations in birds Types of Beaks Type study: <i>Columba livia</i>
4	CIRCULATION: Circulatory media, Blood composition & functions Formation of blood cells, Types Structure & functions of Blood cells Blood group ABO System & Rh factor Blood transfusion Disorders: Anemia and Types , Hypertension, Leukemia

Reference Books:

- Modern Text Book of zoology - Vertebrate by R .L. KOTPAL.
- Chordate Zoology by Jordan and Verma.
- Animal Physiology by M.P.ARORA.
- Principles of Anatomy & Physiology by TORTORA and GRABOWSKI

SARDAR PATEL UNIVERSITY
B.Sc. SECOND SEMESTER
Practical - ZOOLOGY
Effective from June 2023
2 Credits, 4 periods per week

Course Code	US2MAZOO02 (P)	Title of the Course	Practicals
Total Credits of the Course	02	Hours per Week	04

Part-1	<ul style="list-style-type: none"> • Classification upto class using Permanent slides and Specimen <i>Balanoglossus, Hardmania, Amphioxus, Lamprey, Dogfish(scoliodon), Skate fish , Ray fish, Lebeo, Rana tigrina, Uromastix, snake, Columbalivia, Rabbit</i> • <i>To study Scales By Permanent Slides,</i> • <i>To Study Types of Fins</i> • <i>Parental Care: Ichthyophis, Desmognathousfiscuss, Alytus, Pipa, Axolotl, by specimen</i> • <i>To Study Types of Poisonous and Nonpoisonous Snakes with their fangs</i> • <i>.On field study of Amphibians and Reptiles</i> <p><i>(Specimen other than the list can be exhibit to the students as per the availability in the Institutes)</i></p>
Part-2	<ul style="list-style-type: none"> • <i>To study Functions of Microscope</i> • <i>To Study Types of Feathers</i> • <i>To Study Types of Birds Specimen with Different Beaks</i> • <i>Pecten of Pegion, V.S of skin Pegion, T S of Gizzard Pegion</i> • <i>To Study Haemin Crystals from own blood</i> • <i>To Study Blood Group of own blood</i> • <i>To Study types of WBC through blood smear</i> • <i>On field study of Birds</i> <p><i>(Specimen other than the list can be exhibit to the students as per the availability in the Institutes)</i></p>

Reference Books:

- A Manual of Practical Zoology- vertebrate by P.S.VERMA
- Practical Physiology, Anatomy & Biochemistry by SHAH, PATEL& GOEL
- Practical Zoology vertebrate by S.S. LAL.

SARDAR PATEL UNIVERSITY
B.Sc. Zoology Semester II
US2MIZOO01 (T) Chordate Diversity
Effective from June 2023
Zoology Core Course

Course Code	US2MIZOO01 (T)	Title of the Course	Chordate Diversity
Total Credits of the Course	04	Hours per Week	04

Course Objectives:	<ol style="list-style-type: none"> 1. To understand the Zoological concepts of Animal with particular emphasis on their Experimental outcomes. 2. To understand the basic concepts of types of vertebrates. The unit also introduces understanding of General Aspects of vertebrate Phyla and Animals. To provide exposure to Circulation process and Diseses
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Unit	Description
1	General characteristics and outline classification of Chordates Comparative account of Hemichordata, Urochordata, Cephalochordata and Protochordata Migration of Fishes with examples Parental care in fishes Parental care in amphibians Neoteny, Paedogenesis and economic importance of Amphibians
2	Identification of poisonous and non-poisonous snakes Mesozoic Reptiles and Dinosaurs Migration of Birds – types, causes and significance Flightless and Flying adaptations in birds Types of Beaks

Reference Books:

- Modern Text Book of zoology - Vertebrate by R .L. KOTPAL.
- Chordate Zoology by Jordan and Verma.

SARDAR PATEL UNIVERSITY
B.Sc. SECOND SEMESTER
Practical - ZOOLOGY
US2MIZOO02 (P) Chordate Diversity
Effective from June 2023
2 Credits, 4 periods per week

Course Code	US2MIZOO02 (P)	Title of the Course	Practicals
Total Credits of the Course	02	Hours per Week	04

	<ul style="list-style-type: none"> • Classification upto class using Permanent slides and Specimen <i>Balanoglossus, Hardmania, Amphioxus, Lamprey, Dogfish(scoliodon), Skate fish , Ray fish, Lebeo, Rana tigrina, Uromastix, snake, Columbalivia, Rabbit</i> • To study Scales By Permanent Slides, • To Study Types of Fins • Parental Care: <i>Ichthyophis, Desmognathousfiscuss, Alytus, Pipa, Axolotl, by specimen</i> • To Study Types of Poisonous and Nonpoisonous Snakes with their fangs • To Study Types of Feathers • To Study Types of Birds Specimen with Different Beaks • Field Study <p><i>(Specimen other than the list can be exhibit to the students as per the availability in the Institutes)</i></p>
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- Practical Zoology vertebrate by S.S. LAL.

SARDAR PATEL UNIVERSITY
B.Sc. Zoology Semester II
Effective from June 2023

Course Code	US2IDZOO01 (T)	Title of the Course	Chordates
Total Credits of the Course	04	Hours per Week	04

Unit	Description
1	General characteristics and outline classification of Chordates Comparative account of Hemichordata, Urochordata, Cephalochordata and Protochordata Migration of Fishes with examples Parental care in fishes Parental care in amphibians Neoteny, Paedogenesis and economic importance of Amphibians
2	Identification of poisonous and non-poisonous snakes Mesozoic Reptiles and Dinosaurs Migration of Birds – types, causes and significance Flightless and Flying adaptations in birds Types of Beaks

Reference Books:

- Modern Text Book of zoology - Vertebrate by R .L. KOTPAL.
- Chordate Zoology by Jordan and Verma.

SARDAR PATEL UNIVERSITY
B.Sc. SECOND SEMESTER
Practical - ZOOLOGY
US2IDZOO02 (P) Chordates
Effective from June 2023
2 Credits, 4 periods per week

Course Code	US2IDZOO02 (P)	Title of the Course	Practicals
Total Credits of the Course	02	Hours per Week	04

	<ul style="list-style-type: none"> • Classification upto class using Permanent slides and Specimen <i>Balanoglossus, Hardmania, Amphioxus, Lamprey, Dogfish(scoliodon), Skate fish , Ray fish, Lebeo, Rana tigrina, Uromastix, snake, Columbalivia, Rabbit</i> • To study Scales By Permanent Slides, • To Study Types of Fins • Parental Care: <i>Ichthyophis, Desmognathousfiscuss, Alytus, Pipa, Axolotl, by specimen</i> • To Study Types of Poisonous and Nonpoisonous Snakes with their fangs • To Study Types of Feathers • To Study Types of Birds Specimen with Different Beaks • Field Study <p><i>(Specimen other than the list can be exhibit to the students as per the availability in the Institutes)</i></p>
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Reference Books:

- A Manual of Practical Zoology- vertebrate by P.S. VERMA
- Practical Zoology vertebrate by S.S. LAL.

SARDAR PATEL UNIVERSITY
B.Sc. Zoology Semester II
US2SEZOO01 (T) Economic Zoology
Effective from June 2023

Course Code	US2SEZOO01 (T)	Title of the Course	Economic Zoology
Total Credits of the Course	02	Hours per Week	02

Unit	Description
1	Fresh water Fishes of India, Breeding Techniques of Inland Fisheries Fresh water fishery marketing and by products Brackish water fishery [Prawn culture]and by products
2	Poultry: Farm, design and Breeds ,Food, Dieses and Care Dairy industry: Animal Husbandary concept and Care, Cooperative society Pharmaceuticals from animals: Ancient concept and Advance Technology

Reference Books:

Economic Zoology : Shukla and Upadhyay
Economic and applied – entomology: Ashok kumar
Fishery science and Indian fisheries : Srivastava
Poultry science: Dr N T Mehta and Dr Dhasura