

DEPARTMENT OF ZOOLOGY

LESSON PLAN (ODD SEMESTER)

SESSION: 2024-25

Name of Assistant Professor: Dr. Umesh Kumar

Class & Section: B.Sc. I (Life Science) Section A & B

Paper: 24 UN-ZOO-101 (Animal Diversity of Non-Chordates)

Month	Week/ Days	Chapter/ Topic
July	Week 4	General characters of Protozoa
August	Week 1	Classification up to class level
	Week 2	Type study of Plasmodium
	Week 3	General characters of Porifera
	Week 4	Classification of Porifera up to class level
September	Week 1	General characters of Coelentrata
	Week 2	Classification of Coelentrata up to class level
	Week 3	Type Study of Obelia
	Week 4	General characters of Platyhelminthes, General characters of Aschelminthes, Class test
October	Week 1	Platyhelminthes and Aschelminthes: Classification up to class level
	Week 2	Type study of Liver Fluke, Fasciola hepatica
	Week 3	Phylum – Annelida: General characters and classification up to class level
	Week 4	Type study of Earthworm, Pheretima posthuma (Habitat, habits, metamerism, digestive System, circulatory system, nervous system, reproductive system)
	Week 5	Phylum – Arthropoda: General characters and classification up to class level, Type study of Cockroach, Periplaneta americana (Habitat, habits, external morphology, digestive system, respiratory system, excretory system, reproductive system)
November	Week 1	Phylum - Mollusca: General characters and classification up to class level, Type study of Pila
	Week 2	Phylum – Echinodermata: General characters and classification up to class level, Type study of Asterias (Sea Star) (Habitat, habits, external morphology, water vascular system, Circulatory System)
	Week 3	Phylum Hemichordata: General characters of Hemichordates with examples
	Week 4	Class test & Revision

Umesh Kumar
(UMESH KUMAR)

LESSON PLAN FOR ODD SEMESTER (SESSION: 2024-25)

Name of Assistant Professor: **Dr. Ajay Kumar**

Department of Zoology

Class & Section: B.Sc.II (Life Science) Section A

Paper: 24 Animal Physiology (20UZOO301) and animal Biochemistry (20UZOO302)

Month	Week/ Days	Chapter/ Topic
July	Week 4	Introduction and classification of carbohydrates, General properties, structure, Glycolysis, kerb cycle ETC
August	Week 1	Physiology of digestion of carbohydrates, proteins and lipid, structure and importance of fatty acids and types
	Week 2	Physiology of respiration and transport of gases, biosynthesis and beta oxidation of fatty acids
	Week 3	Structure of heart and origin and conduction of cardiac impulse, introduction of proteins
	Week 4	Composition of blood, structure and function & general properties of proteins,
September	Week 1	classification & nomenclature of proteins, Structure of nephron and types
	Week 2	Physiology of excretion, transport through membrane, buffers
	Week 3	Structure of a neuron, membrane potential, origin and conduction of action potential in myelinated and non-myelinated nerve fibre
	Week 4	Nucleic acid introduction and types, structure and function of DNA
October	Week 1	Ultra-structure of Skeletal muscle. physiology of muscle contraction
	Week 2	Physiology of male reproduction
	Week 3	Spermatogenesis and hormonal control
	Week 4	Physiology of female reproduction, menstrual cycle and its hormonal control
	Week 5	Diwali vacation
November	Week 1	structure and function of RNA and its different components,
	Week 2	types of RNA, role in protein synthesis and central dogma Structure and function of pituitary and thyroid gland
	Week 3	Structure and function of Parathyroid's, pancreas and adrenal gland
	Week 4	Structure and function of Adrenal glands/ Revision

Ajay

Odd semester

M.N.S.GOV.T. COLLEGE, BHIWANI
DEPARTMENT OF Zoology

LESSON PLAN

SESSION: 2024-25

Name of Teacher: Dr. KHUSHBOO

Class & Section: BSc-IIIrd yr (5th Sem) Sec-B

Paper: Immunology (Zoology Paper-I)

Month	Week	Topic
July	Week 4	Historical perspective of Immunology, <u>Anatomical Barriers</u>
August	Week 1	Inflammation, Cells & Molecules in Innate Immunity
	Week 2	Adaptive Immunity, Passive & Active Immunity
	Week 3	Types of Antibody, Class Test, Assignments
	Week 4	Antigenicity & Immunogenicity
September	Week 1	Immunogens, Adjuvants
	Week 2	Haptens, B & T-cell epitopes
	Week 3	Structure & functions of Immunoglobulins
	Week 4	Primary immune response
October	Week 1	Secondary immune response
	Week 2	Hypersensitivity & vaccines
	Week 3	Gell & Coombs' classification
	Week 4	Diwali vacations
	Week 5	Types of hypersensitivities
November	Week 1	Types of vaccines
	Week 2	Types of vaccines
	Week 3	Revision
	Week 4	Revision

Khushboo
(Dr. Khushboo)

Odd semester

M.N.S.GOV'T. COLLEGE, BHIWANI
DEPARTMENT OF Zoology

LESSON PLAN

SESSION: 2024-25

Name of Teacher: Dr. KHUSHBOO

Class & Section: B.Sc-IIIrd yr (5th sem) Sec-A

Paper: Aquaculture (Zoology Paper-I)

Month	Week	Topic
July	Week 4	General description of fish, Feeding habits
August	Week 1	Manner of reproduction in fish, Types of fins
	Week 2	Types of scales, Uses of scales in classification
	Week 3	Determination of fishage, Gill & gas exchange
	Week 4	Swim Bladder, Types & role in Respiration
September	Week 1	Reproduction in fish
	Week 2	Electric organs, Bioluminescence
	Week 3	Mechanoreceptors, Schooling
	Week 4	Parental Care, Migration in fishes
October	Week 1	Inland & Marine Fisheries
	Week 2	Fish Diseases, Fishing crafts & Gear
	Week 3	Depletion of fisheries resources, ^{Sustainable} aquaculture
	Week 4	Diurnal vacations
	Week 5	Extensive, semi-extensive, Intensive fish culture
November	Week 1	Prawn & Pearl Culture, Poly culture
	Week 2	Composite fish culture, Induced breeding in fish
	Week 3	Revision of syllabus
	Week 4	Revision of syllabus

Khushboo
(Dr. Khushboo)

Odd Semester

M.N.S.GOV. COLLEGE, BHIWANI
DEPARTMENT OF Zoology

LESSON PLAN

SESSION: 2024-25

Name of Teacher: Sangeeta

Class & Section: B.Sc.III (5th Sem.)

Paper: Economic Zoology (Paper II)

Month	Week	Topic
July	Week 4	Life history, control & damage by <u>Helicoverpa</u>
August	Week 1	<u>Pyrailla perpusilla</u> and <u>Papilio demoleus</u>
	Week 2	<u>Callosobruchus</u> , <u>Sitophilus</u> , <u>Tribolium</u>
	Week 3	Lac culture.
	Week 4	Class test and assignment.
September	Week 1	Life history and control of <u>Pediculus humanus</u>
	Week 2	<u>Anopheles</u> , <u>Culex</u>
	Week 3	<u>Aedes</u> , <u>Xenopsylla</u>
	Week 4	Sericulture
October	Week 1	Preservation & artificial insemination in cattles.
	Week 2	Induction of early puberty.
	Week 3	Synchronization of estrus in cattles.
	Week 4	Piggery.
	Week 5	Diwali vacations.
November	Week 1	Poultry farming.
	Week 2	Principle and management of breeding stock
	Week 3	Processing and preservation of eggs.
	Week 4	Revision.



Odd Semester

M.N.S.GOV'T. COLLEGE, BHIWANI DEPARTMENT OF Zoology

LESSON PLAN

SESSION: 2024-25

Name of Teacher: Sangeeta.

Class & Section: B.Sc. III (5th Sem.)

Paper: Animal Biotechnology. (Paper II)

Month	Week	Topic
July	Week 4	Concept, scope and applications of biotech in Agri.
August	Week 1	Veterinary, human health, medicine and fisheries.
	Week 2	Cloning vectors: Plasmids, Cosmids
	Week 3	Class test and assignment.
	Week 4	Phagemids, Lambda Bacteriophage, M13, BAC, YAC.
September	Week 1	Expression vectors. Restriction enz.
	Week 2	DNA sequencing.
	Week 3	Southern, Northern and Western blotting.
	Week 4	Polymerase chain reaction.
October	Week 1	DNA fingerprinting.
	Week 2	Genetically modified organisms.
	Week 3	Applications of transgenic animals.
	Week 4	Culture techniques.
	Week 5	Diwali vacations.
November	Week 1	Animal cell culture, Expressing cloned genes.
	Week 2	RDT.
	Week 3	Revision
	Week 4	Revision.

Sangeeta