

Govt. PG College for Women, Rohtak
Zoology Department
Lesson Plan 2026-27 (Odd Semester)

B.Sc.-1st Semester

Class: B.Sc. (Life Science)- 1st Semester (Theory Major) Nomenclature of paper: Animal Diversity- I Teachers: Ms. Ankita, Ms. Nisha, Ms. Nitika	
Week & Date	Topics
August 11-17	Unit-1: Phylum Protozoa: General characters, type study of Plasmodium
August 18-24	Parasitic protozoans: Life history, mode of infection and pathogenicity of <i>Entamoeba</i> , <i>Trypanosoma</i>
August 25-31	Phylum Porifera: General characters, Canal systems
Sept 01-06	Spicules in sponges TEST
Sept 07- 13	Unit-2: Phylum Coelenterata: General characters, Corals and Coral reefs
Sept 14- 27	Phylum Helminthes: General characters, type study of <i>Fasciola hepatica</i> TEST
Sept 28- Oct 04	Unit-3: Phylum Annelida: General characters, Metamerism in annelids
Oct 05- 12	Phylum Arthropoda: General characters
Oct 13- 25	Type study- <i>Periplaneta</i>
Oct 26-31	Unit-4: Phylum Mollusca: General characters TEST
Nov 01- 09	Diwali Vacation
Nov 10- 15	Phylum Echinodermata: General characters
Nov 16- 23	Type Study- <i>Asterias</i> (Sea star)
Nov 24- 30	Phylum Hemichordata: General characters TEST
Dec 01-06	Revision

Class: B.Sc. Physical Sciences (1st Semester)
Paper Nomenclature: Human Evolution (Minor Zoology)
Teacher Name: Dr. Monika

Dates	Topics
14–17 Aug	Origin of evolutionary thoughts
18–24 Aug	Theory of evolution by Natural Selection
25–31 Aug	Linnaeus & Darwin theory
1–7 Sept	Test of Unit I
8–14 Sept	The forces of evolution, formation of species
15–21 Sept	Natural selection, Genetic drift
22–28 Sept	Gene flow, founder effect
29 Sept–5 Oct	Test of Unit II
6–12 Oct	Human variation and Race
13–19 Oct	Human adaptation
20–26 Oct	Life history, primate society
27–31 Oct	Social behaviour and culture
1–9 Nov	Diwali break
10–16 Nov	The hominin record, Early hominins
17–23 Nov	Evolution of human behavior
24–30 Nov	Neanderthals and contemporaries
1–6 Dec	Test of Unit III, IV

Class: B.Sc. Life Science (1st Semester)

Nomenclature of paper: Skill Zoology (Apiculture)

Teacher's Name: Ms. Nitika & Ms. Nisha

Week	Name of the Topic / Skill
Aug: 11 to 15	UNIT I – Apiculture: Meaning, definition, scope and importance of Apiculture
Aug: 15 to 19	History and development of Apiculture; significance of honey bees in agriculture and ecosystem
Aug: 19 to 22	Status of Apiculture Industry in India; major honey-producing regions and present scenario; classification of Honey Bees; major groups and species of honey bees.
Aug: 22 to 25	Life Cycle of Honey Bee – egg, larva, pupa and adult; complete metamorphosis. Revision and Test
Aug: 25 to 30	Identification of Indigenous and Exotic Honey Bee Species; distinguishing features of important species
Sept: 1 to 6	UNIT II – Cultivable Species of Honey Bees with reference to India: important species used in Indian Apiculture
Sept: 8 to 16	Social organization of Honey Bees; colony structure and caste system – Queen, Drone and Worker. Revision and Test
Sept: 16 to 23	Castes of Honey Bees – morphology, functions and division of labour; role of Queen, Drone and Worker
Sept: 24 to 07 Oct.	Nesting behaviour of Honey Bees; structure and organization of the honey bee nest/colony, Bee foraging behaviour; collection of nectar and pollen; Waggle Dance and communication in honey bees
Oct: 08 to 18	Seasonal management of Honey Bees; swarming behaviour and its management; defence behaviour.
Oct: 19 to 31	Diseases and Enemies of Honey Bees; common diseases, pests and predators; control and preventive measures
Nov: 01 to 09	DIWALI VACATIONS
Nov. 10 to 14	UNIT III – Role of Bees in Cross-Pollination: importance of honey bees in horticulture and agriculture; methods of artificial bee keeping

Nov: 15 to 23	Beekeeping Industry and Equipment used in Beekeeping; important tools, hives and protective equipment
Nov: 23 to 30	UNIT IV – Products of Apiculture Industry: Honey, Bee Wax, Royal Jelly
Dec.: 01 to 04	Bee Venom, Propolis and Pollen – uses and importance
Dec: 05 & 06	Revision and Test

Class: B.A.– 1st Semester (Multidisciplinary Course)**Nomenclature of Paper: Basics of Zoology–I****Teachers: Ms. Ankita, Ms. Nitika**

Week & Date	Topics
August 11–17	Unit-1: Zoology – definition and scope; Introduction to Kingdom Animalia; basic animal characters; Non-chordates and invertebrates – introduction and examples; Biodiversity – introduction and scope
August 18–24	General characters of Protozoa and Porifera ; Introduction to Protozoa; Study of Amoeba
August 25–31	Amoeba : structure and economic importance; Sponges : structure and economic importance
Sept 01–06	Unit-1 Revision; TEST
Sept 07–13	Unit-2: General characters of Coelenterata ; Ecological importance of corals
Sept 14–27	General characters of Annelida ; Morphology of earthworm and its ecological role; Economic importance of Leech ; TEST
Sept 28–Oct 04	Unit-3: General characters of Arthropoda and Mollusca
Oct 05–12	Basic characters of insects and snails ; Insects as pests – Grasshopper
Oct 13–25	Economic importance of Honey Bee ; Snails as pests in paddy fields
Oct 26–31	Unit-3 Revision; TEST
Nov 01–09	Diwali Vacation
Nov 10–15	Unit-4: General characters of Echinodermata
Nov 16–23	Study of Starfish (Asterias) : basic characters, role in ecosystem and economic importance
Nov 24–30	General characters of Hemichordata ; TEST
Dec 01–06	Revision

Class: BBA Second year (3rd Semester)
Nomenclature of paper: Multidisciplinary Course (Indian Systems of Health and Wellness)

Teacher's Name: Ms. Nitika & Mr. Rohit

Week	Name of the Topic
Aug: 11 to 15	UNIT I – Introduction to Health & Wellness: Definition of Health; Importance of health in everyday life
Aug: 15 to 19	Components of Health – Physical, Social and Mental Health; their relevance to overall well-being
Aug: 19 to 22	Components of Health – Spiritual Health and its relevance; holistic concept of health
Aug: 22 to 25	Concept of Wellness; relationship between Health and Wellness. Revision and Test
Aug: 25 to 30	Mental Health and Wellness; importance of mental and emotional well-being
Sept: 1 to 6	Determinants of Health Behaviour; factors influencing healthy and unhealthy behaviours
Sept: 8 to 16	UNIT II – Mind, Body and Well-being: Concept and meaning of Mind-Body Connection; relationship between mind and body
Sept: 16 to 23	Implications of Mind-Body Connection; influence of thoughts, emotions and mental states on physical health. Revision and Test
Sept: 24 to 07 Oct.	Well-being – meaning, dimensions and importance; approaches for promoting physical and mental well-being
Oct: 08 to 18	Digital Well-being; impact of digital technology, excessive screen time and social media on health
Oct: 19 to 31	UNIT III – Deficiency & Diseases: Malnutrition and Over-nutrition; causes, consequences and prevention
Nov: 01 to 09	DIWALI VACATIONS
Nov. 10 to 14	Body Systems and Common Diseases; basic understanding of major body systems and common health disorders. Revision and Test
Nov: 15 to 23	Sedentary Lifestyle and Risk of Disease; Modern Lifestyle and Associated Health Risks; preventive measures
Nov: 23 to 30	UNIT IV – Indian System of Well-being: Health Beliefs of India; traditional and holistic perspectives of health
Dec.: 01 to 04	Health Systems in India – AYUSH ; introduction to Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homoeopathy; Perspective of Indigenous People towards Health
Dec: 05 & 06	Happiness and Well-being in India; Indian approaches to happiness and holistic well-being. Revision

B.Sc.-3rd Semester

Class: B.Sc Second year (3rd Semester) Life Science Nomenclature of paper: Major Zoology (Cell Biology and Genetics) Teacher's Name: Mr. Aakash, Mr. Rohit, Ms. Muskan	
Dates/ Week	Name of the Topic
Aug: 11 to 18	Plasma Membrane: Fluid Mosaic Model, transport across the membrane, mechanism of active and passive transport, endocytosis, and exocytosis.
Aug: 19 to 26	Endoplasmic Reticulum (ER): Types and its functions. Golgi complex: Structure and role of golgi-complex in an animal cell.
Aug: 27 to 03	Ultrastructure and functions of Nucleus: nucleolus, nucleosome concept and role of histones, fine structure of chromosomes, Revision and Test
Aug: 18 to 23	Euchromatin and heterochromatin, lampbrush chromosomes, and polytene chromosomes. Ribosomes: Types and role in protein synthesis.
Aug: 25 to 03 Sept.	Lysosomes: Structure, enzyme and their role; polymorphism.
Sept: 4 to 11	Mitochondria: Structure and role of mitochondria.
Sept: 11 to 18	Cytoskeleton: Microtubules, microfilaments, centriole and basal body, cilia and flagella. Revision and Test
Sept: 19 to 26	Mitosis and Meiosis, an elementary idea of cellular basis of Immunity.
Sept: 26 to 4 Oct.	Elements of Heredity and variations, the varieties of gene interactions, Linkage and recombination. Assignment and Report
Oct: 05 to 15	Sex determination and its mechanism, Sex linked inheritance: Haemophilia and colour blindness in man.
Oct: 16 to 31	Extra-chromosomal and cytoplasmic inheritance: Kappa particles in Paramecium. ii) Milk factor in mice Multiple allelism: Eye colour in Drosophila; A, B, O blood group in man. Revision and Test
Nov: 01 to 09 Nov.	Diwali Vacations
Oct: 10 to 17	Nature and function of genetic material. Structure and type of nucleic acids.

Oct: 18 to 22	Gene mutations: spontaneous and induced (chemical and radiation) mutations; chemical basis of mutations; transition, transversion. Rapid DNA analyser.
Nov: 22 to 25	Chromosomal abnormalities involving autosomes and sex chromosomes: Structural chromosomal aberrations (deletion, duplication, inversion and Translocation.
Nov: 26 to 30	Numerical aberrations (autopolyploidy, euploidy and polyploidy in animals) Inborn errors of metabolism (Alkaptonuria, Phenylketonuria, Albinism, Sickle-Cell Anemia).
Dec.: 01 to 06	Revision

Class: B.Sc. Second year (3rd Semester) Life Science
Nomenclature of paper: Skill Zoology (Microtomy)
Teacher's Name: Mr. Aakash

Week	Name of the Topic/ Skill
Aug: 11 to 15	Microtomy: Introduction, definition, History
Aug: 15 to 19	Applications in Biological Sciences.
Aug: 19 to 22	Types of microtomes- Rotary microtome, Sledge Microtome, and Cryomicrotome.
Aug: 22 to 25	Collection and transportation of samples/specimens for histological examination. Revision and Test
Aug: 25 to 30	Basic concepts of fixation- Various types of fixatives used in microtomy.
Sept: 1 to 6	Process of fixation; Embedding-Block formation.
Sept: 8 to 16	Section Cutting: Paraffin section cutting; Staining.
Sept: 16 to 23	Spreading the sections and attaching them to the glass slides. Revision and Test
Sept: 24 to 07 Oct.	Staining – Principle and procedure; Preparation of Stains and solvents.
Oct: 08 to 18	General Staining Procedures for Paraffin-Embedded Tissues.
Oct: 19 to 31	Nuclear Stains.
Nov: 01 to 09	Diwali Vacations
Nov.: 10 to 14	Cytoplasmic stains- Haematoxylin Revision and Test
Nov: 15 to 23	Eosin staining, Mercury Bromophenol.
Nov: 23 to 30	Commonly used mountants in microtomy
Dec.: 01 to 04	Blue staining; Toulidine Blue.
Dec: 05 & 06	Revision

Class: B.Sc. Second year (3rd Semester) Life Science
Nomenclature of Paper: Minor Zoology (DNA Fingerprinting)
Teacher's Name: Mr. Rohit

Week	Name of the Topic
Aug: 11 to 14	DNA Profiling: Introduction, History of DNA Typing, human genetics – heredity.
Aug: 15 to 23	Alleles, mutations, molecular biology of DNA and RNA, and DNA types
Aug: 23 to 30	DNA Polymorphism: VNTR, STR, SNP, Mt DNA, DNA Markers, sequence. Revision and Test
Aug: 31 to 05 Sept.	Polymorphism. DNA typing systems- RFLP analysis.
Sept: 06 to 12	PCR amplifications.
Sept: 13 to 18	DNA profiling methods: Sample collection and preservation for DNA profiling.
Sept: 19 to 26	DNA Extraction, Analysis of SNP, STR, Y-STR. Mitochondrial DNA, evaluation of results. Revision and Test
Sept: 27 to 05 Oct.	Database, quality control, certification and accreditation.
Oct: 06 to 11	Forensic applications of DNA Profiling: Applications in disputed paternity cases, child swapping.
Oct: 12 to 19	Missing person's identity – civil immigrations, veterinary.
Oct: 19 to 31	wildlife and agriculture cases.
Nov: 01 to 09	Diwali Vacations
Nov: 10 to 15	Legal perspectives – legal standards for admissibility of DNA profiling. Revision and Test
Nov: 16 to 22	New and future technologies: DNA chips.
Nov: 23 to 28	Rapid DNA analyser.
Nov: 29 to 04 Dec.	Imitations of DNA profiling.
Dec: 05 & 06	Revision

B.Sc. - 5th Semester

Class: B.Sc. third year (Vth Semester) Subject Nomenclature: Major Zoology (Developmental Biology) Teacher's Name: Dr. Manju Chhikara and Dr. Monika	
Date / Period	Topic / Content
11–17 Aug	Spermatogenesis; structure of sperm
18–24 Aug	Oogenesis; structure of ovum
25–31 Aug	Hormonal regulation; ovulation; formation of corpus luteum
1–7 Sept	Test of 1st Unit; fertilization; twins (monozygotic and dizygotic)
8–14 Sept	Prevention of polyspermy; parthenogenesis
15–21 Sept	Types of eggs; pattern of development
22–28 Sept	Implantation and gestation
29 Sept–5 Oct	Types and functions of placenta in mammals
6–12 Oct	Test of 2nd unit
13–19 Oct	Blastulation and gastrulation
20–26 Oct	Fate map of frog; amphibian metamorphosis
27–31 Oct	Fate map in chick
1–9 Nov	Diwali Break
10–16 Nov	Concept of organizer and induction
17–23 Nov	Regeneration in invertebrates and vertebrates
24–30 Nov	Extraembryonic membranes
1–6 Dec	Test of 3rd and 4th unit

Class: B.Sc. Final Year (Minor Zoology) Nomenclature of Paper: Poultry Farming (Minor Zoology) Teacher's Name: Ms. Muskan	
Dates	Topics
11 Aug – 17 Aug	General Introduction to Poultry Farming
18 Aug – 24 Aug	Definition of Poultry Pest
25 Aug – 31 Aug	Scenario of Poultry Farming in India
1 Sept – 7 Sept	Breeds, varieties & strains; life cycle of poultry
8 Sept – 14 Sept	Poultry Feed Management – Principles of Feeding
15 Sept – 21 Sept	Nutrient Requirements of Layers & Broilers
22 Sept – 28 Sept	Feed Formulation & Methods of Feeding
29 Sept – 5 Oct	Test of Unit I & II
6 Oct – 12 Oct	Layer Industry in India
13 Oct – 19 Oct	System of Layer Farming
20 Oct – 26 Oct	System of Housing
27 Oct – 31 Oct	Poultry House Management of Different Strains
1 Nov – 9 Nov	Diwali Vacations
10 Nov – 16 Nov	Test of Unit III
17 Nov – 23 Nov	Poultry Diseases – Viral, Bacterial, Fungal and Parasitic
24 Nov – 30 Nov	Vaccination & Cleaning Programme
1 Dec – 6 Dec	Disinfection & Fumigation of Poultry House Test of Unit IV