LESSON PLAN (August 2025 – November 2025)

Name of Assistant Professor: Naveen Kumar Saxena

Class: B.Sc.1st Year Semester :-1st

Subject: Zoology

Paper : SEC (Skill Enhancement Course)

Week 1	**Unit 1** **Introduction to Bird watching.**
Week 1,2	**Characteristics of Birds with flight adaptations.**
Week 3	**Important field signs of bird watching.** **Unit Test**
Week 4	**Unit II** **Zoological Names of Important birds.**
Week 5	**Field characters of important birds.**
Week 6	**Sexual dimorphism in birds**

	Unit Test
Week 7.	**Unit III** **Important Indian Bird areas**
Week 8	**Important Bird areas of Haryana**
Week 9	**Resident & Migratory Birds** **Unit Test**
Week 10	**Unit 4** **Birds as bio-indicators**
Week 11	**Birds in food chain and Agriculture**
Week 12	**Bird Migration**
Week 13	

Assignments & Test
Week 14 **Unit Test**

LESSON PLAN (August 2025– November 2025)

Name of Assistant Professor: Naveen Kumar Saxena

: B.Sc.1st Year Semester :-1st

Subject: Zoology

MDC : Paper (Basics of Zoology – I)

Week 1, 2	**Unit 1** **Zoology: Definition and scope, introduction to Animal Kingdom, animal characters, Non-Chordates and Invertebrates with examples, Invertebrate Phyla, Introduction to basic characters of animal with special reference to the non chordates,**
Week 3	**Biodiversity: Introduction and Scope, General characters of Protozoa and Porifera.**
Week 4	**Study of Amoeba and sponges with special reference to its structure and economic importance.**
Week 5	**Unit 2** **General characters of Coelentrata and Annelida;** **Unit Test**
Week 6	**Ecological importance of corals; Morphology of earthworm and Its ecological role, Economic importance of Leech**
Week 7	

	General characters of Arthropoda and Mollusca,
Week 8	Unit 3 Study of basic characters of insects and snails. Unit Test
Week 9	Insects as pest : Grasshopper, Economic importance of Honey Bee.
Week 10	Snails as pest in Paddy fields
Week 11	General characters of Echinodermata, Unit Test
Week 12	Unit 4 Study of basic characters of Star fish with reference to its role.
Week 13	Ecosystem: Economic importance of Star Fish
Week 14	Ecosystem: Economic importance of Star Fish.

Week 15 **Unit Test**
Week 15 **Assignments & Test**

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Name of Assistant Professor: Naveen Kumar Saxena

Class: B.Sc.1st Year Semester :-1st

Subject: Zoology

Lesson Plan: From August 2025 To November 2025

Week 1.	**Unit 1**
Phylum Protozoa	**characters and classification up to class level .**
Week 2	
	Type study of *Plasmodium* .
Phylum Porifera	**General characters and classification up to class level.**
Week 3	
	Type study of *Sycon* .
	Unit 2
Phylum Coelenterate	
	General characters and classification up to class level
	Type Study of Obelia
	Unit Test
Week 4	
Phylum -Platyhelminthes and Aschelhminthes :	
Week 5	**General characters and classification up to class level**
Week 6	
	Type study of Liver Fluke, *Fasciola hepatica* .
Week 7	**Unit 3**

Phylum Annelida	
	General characters and classification upto class level.
Week 8	**Type study of Earthworm, *Pheretima posthuma* (Habitat, habits,**
	Metamerism,
	Unit Test
Week 9	
	Digestive System, circulatory system.
Phylum Arthropoda:	
Week 10	**General characters and classification up to class level,**
Week 11	
	Type study of Cockroach, *Periplaneta americana* (Habitat, habits, external morphology,
Week 12	
	Digestive System, respiratory system, excretory system, reproductive system)
	Unit Test
Week 13	**Unit 4**
Phylum Mollusca	
	General characters and classification up to class level, Type study of *Pila globossa*
Week 14	
Phylum Echinodermata	
	General characters and classification up to class level,

Week 15 **Type stud of *Arterias* (Sea Star)** **(Habitat, habits, external morphology, water vascular systum,** **Circulatory system.**
Week 16 **Phylum *Hemichordata*:** **General characters of Hemichordates with examples** **Unit Test**
Week 16 **Assignments & Test**

- B.sc.3rd year 5th semester zoology.
- Paper name. Ecology and environment
- Session. 2025 -2026
- Teacher. Extension lecturer.
- Date. Unit name. Topic name
- 01-08- 2025. - I 09-08-25.ntroduction and basic
- concepts.deinition significance. Cc oncepts of habitat and ecological niche
- 11-08-2025-16-08-25. Ecosystem. Concepts. Components properties properties and functions. Ecological energetics and energy flow models.
- 18-08- 2025-23-08-25. Food chain food web; trophic structure; ecological pyramids, concept of productivity.
- 25-08-25-30-08-25 -Factors affecting environment; : Abiotic factors (light intensity, quality andduration) temperature, humidity,wind,rainfall, topography,edaphic factors,
- 01-09-25-06-09-25-Biotic factors. Introduction to major ecosystem of the world.
- 08 -09-25 -12-09-25-biogeographical cycles:-concepts, resevoir pool,gaseous cycles and sedimentary. cycles.
- 15-09-25-20-09-25: community ecology:characteristics, composition,structure, structure origin and development of a community, ecological succession,
- Unit iii. 22-09-25-27-09-29-population, growth and regulation.
- Population interactions -competition, predation,parasitism commensalism and mutualism.
    - 30-09-25-04-10-25- concepts of biodiversity and conservation of natural resources.climate change: global warming, greenhouse effect,
- 06-10-2025-11-10-25- Ozone depletion and sustainable development.
- 20-10-25-25-10-25. - Natural resources-types , uses and conservation. Environmental pollution: Air, water pollution so meil pollution and management strategies.
- 27-10-25-02-11-25. Environmental impact assessment.

- Lesson plan.
- Class. B sc.2nd year 3rd semester I
- Virender Kumar extension lecturer

Cell biology and animal Genetics.

Date. Unit name. Topic name

01.08.2025- 08-08-2025 General structure of animal cell. Plasma membrane:various modes of transport across the membrane.

11-08- 2025-16-08- 2025. - Mechanism of active and passive transport;endocytosis and passive transport. Endoplasmic reticulum:types and function

18-08-2025- 23-08-2025-golgi complex : structure'associated enzymes and role of golgi complex in animal cell. Ribosomes: types and role in protein synthesis.

25-08- 2025-30-08-2025. Lysosomes:structure, enzymes and their role;polymorphism. Mitochondria:structure, mitochondria as semisutonomous body. Biogenesis and function of mitochondria . Cilia and flagella. Structure and functions.

O1-09-2025-06-09-2025-ultrastructure and functions of nucleus: nuclear membrane,nuclear lamina, nucleolus. Fine structure of chromosomes,

08 -09-2025-12-09-2025. Nucleosome concept and roleof histone, euchromatin and heterochromatin.

Unit 3.:15 -09- 2025-20-09-2025. -introduction and Mendels laws of inheritance. Linkage and recombination. Cell cycle, crossing over and chiasmata formation gone mapping

22-09-2025-27-09-2025- Sex determination mechanisms :Male And female heterozygous system.;genetic balance systems, cytoplasmic and environmental factors;role of hormones in sex determination.

30-09-2025-04- 10-2025.-Sex- linked inheritance: Haemophilia and colour blindness

In man;eye colouring drosophila; non- dysfunction of sex chromosomes in Drosophila

06-10-2025-10-10-2025. -Sex-linked-sex influenced inheritance. Extra chromosomal and cytoplasmic inheritance.;kappa particles in paramecium;shell coiling in snails;milk factors in mice.

Unit -4. 14-10-2025-19-10-2025. Multiple allelism:Eye colour in Drosophila; A,B,O-bloodgroup in man.

Human genetics:Human karyotype, chromosomal abnormalities involving autosomes and sex chromosomes, monozygotic anddixygotic twins.

27-10-2025-31-10-2025. Inborn error of metabolism(Alcaptonuria, phenylketonuria, albinism, sickle-cell anaemia)

03-11-2025-08-11-2025..Applied genetics:Genetic counselling;pre natal diagnosis;DNA fingerprinting,Transgenic animals.

Kumar