

GAUR BRAHMAN DEGREE COLLEGE, ROHTAK

Subject Name: ANIMAL DIVERSITY-II (**MAJOR**)

Zoology

Subject Code: 24ZOOM402DS01

Sr.No	Unit	Lesson Plan: Batchelor of Life Science: 2025-26 (Semester-2 ND)	Month
		Theory & Practical	
1	Unit-1	Chordates: Salient features of chordates, principles of classification Protochordates: Type study of Herdmania	January
2	Unit-2	Pisces: General characters. Types of scales and fins in fishes. Type study: Labeo rohita	February
3	Unit-3	Amphibia: General characters Type study: Frog, Parental care in Amphibians Reptilia: General characters, evolution and evolutionary tree of Reptiles, poisonous and non-poisonous snakes and poison Apparatus in Snakes	March
4	Unit-4	Aves: General characters, flight Adaptations in Birds and bird migration. Mammals: General characters, dentition in mammals, Adaptive Radiations in Mammals	April

Dr. Kavita Sharma (Assistant Professor, Deptt. of Science)

Date: 26/11/2025

GAUR BRAHMAN DEGREE COLLEGE, ROHTAK

Subject Name: Entomology

Zoology

Subject Code: Paper - I

Sr.No	Unit	Lesson Plan: Batchelor of Life Science: 2025-26 (Semester-6 th)	Month
		Theory & Practical	
1	Unit-1	Study of important insect pests of crops and vegetables: Sugarcane: (With their systematic position, habits and nature of damage caused. (a) Sugarcane leaf-hopper (<i>Pyrilla perpusilla</i>) (b) Sugarcane Whitefly (<i>Aleurolobus barodensis</i>) (c) Sugarcane top borer (<i>Sciropophaga nivella</i>) (d) Sugarcane root borer (<i>Emmalocera depresella</i>) (e) Gurdaspur borer (<i>Bissetia steniellus</i>) Life cycle and control of <i>Pyrilla perpusilla</i> only. Cotton: (With their systematic position, habits and nature of damage caused. (a) Pink bollworm (<i>Pestiphora gossypifolia</i>) (b) Red cotton bug (<i>Dysdercus cingulatus</i>) (c) Cotton grey weevil (<i>Mylocerus undecimpustulatus</i>) (d) Cotton Jassid (<i>Amrasca devastans</i>) Life cycle and control of <i>Pectinophora gossypiella</i>	January
2	Unit-2	Wheat: Wheat stem borer (<i>Sesamia inferens</i>) with its systematics position, habits, nature of damage caused. Life cycle and control methods. Paddy: (With their systematic position, habits and nature of damage caused) (a) Gundhi bug (<i>Leptocorisa acuta</i>) (b) Rice grasshopper (<i>Hieroglyphus banian</i>) (c) Rice stem borer (<i>Scirpophaga incertullus</i>) (d) Rice Hispa (<i>Diceladisa armigera</i>) Life cycle and control of <i>Loptocorisa acuta</i> only.	February
3	Unit-3	Vegetables: (Their systematics position, habits and nature of damage caused. (a) <i>Aulacophora faveicollis</i> – The Red pumpkin beetle. (b) <i>Dacus cucurbitas</i> – The pumpkin fruit fly. (c) <i>Tetranychus tecarius</i> – The vegetable mite. (d) <i>Epilachna</i> – The Hadda beetle Life cycle and control of <i>Aulacophora faveicollis</i> Stored grains: (Their systematic position, habits and nature of damage caused. (a) Pulse beetle (<i>Callosobruchus maculatus</i>) (b) Rice weevil (<i>Sitophilus oryzae</i>) (c) Wheat weevil (<i>Trogoderma granarium</i>) (d) Rust Red Flour beetles (<i>Tribolium castaneum</i>) (e) Lesser grain borer (<i>Rhizopertha dominica</i>) (f) Grain&Flour moth (<i>Sitotroga cerealella</i>) Life cycle and control of <i>Trogoderma granarium</i>)	March

4	Unit-4	Important bird and rodent pests of agriculture&their management. Pest control: Biological control, its history, requirement and precautions and feasibility of biological agents for control. Chemical control: History, Categories of pesticides, important pesticides from each category to pests against which they can be used, insect repellents and attractants. Integrated pest management	April
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Dr. Kavita Sharma (Assistant Professor, Deptt. of Science)

Date: 26/11/2025

GAUR BRAHMAN DEGREE COLLEGE, ROHTAK

Subject Name: Biomolecules and Mammalian Physiology (Major) Zoology

Subject Code:

25ZOOM404DS01

Sr.No	Unit	Lesson Plan: Batchelor of Life Science: 2025-26 (Semester-4 th)		Month
		Theory	Practical	
1	Unit-1	Introduction , classification, function and general structure and properties of Proteins, carbohydrates and lipids. Nomenclature, classification and mechanism of enzyme action. Inhibition of enzyme action, cofactors.	1. Study of human salivary amylase activity: Effect of temperature, pH, Concentration. 2. Qualitative tests for identification of simple sugars, disaccharides and polysaccharides.	January
2	Unit-2	Nutrition : Digestion and absorption of Carbohydrates, Proteins, Fats. Vitamins. Circulation : Origin, conduction and regulation of heart beat, cardiac cycle, electrocardiogram, cardiac output, Composition and functions of blood&lymph; Mechanism of coagulation of blood, haemopoiesis	3. Haematein crystal preparation. 4. Estimation of Hemoglobin.	February
3	Unit-3	Respiration : Exchange of respiratory gases, transport of gases, lung air volumes, oxygen dissociation curve of haemoglobin, Bohr' s effect, Hamburger' s phenomenon (Chloride shift), control / regulation of respiration. Excretion : Patterns of excretory products viz. Ammoniotelic, ureotelic uricotelic, ornithine cycle (Kreb' s- Henseleit cycle) for urea formation in liver. Urine formation, counter-current mechanism of urine concentration.	5. DLC of Man/RBC count/WBC count. 6.Estimation of abnormal constituents of urine (Albumin, sugar, ketone bodies).	March

4	Unit-4	Neural Integration: Origin and propagation of nerve impulse along with medullated&nonmedullated nerve fibre, conduction of nerve impulse across synapse. Chemical integration of Endocrinology: Mechanism of hormone action and physiology of hypothalamus, pituitary, thyroid, parathyroid, adrenal, pancreas and gonads.	7. Study of permanent slides of rat (compound tissues)	April
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Dr. Kavita Sharma (Assistant Professor, Deptt. of Science)

Date: 26/11/2025

GAUR BRAHMAN DEGREE COLLEGE, ROHTAK

Subject Name: Introduction to Fisheries (Minor)

Zoology

Subject Code: 25ZOO403MI01

Sr.No	Unit	Lesson Plan: Batchelor of Life Science: 2025-26 (Semester-4 th)	Month
		Theory & Practical	
1	Unit-1	Introduction-What is fisheries biology? Sampling strategies, Streams: physical sampling Electrofishing in fisheries	January
2	Unit-2	Safety in Fisheries Work, Invasive Species-a growing threat to global fisheries, Climate change impacts on fisheries	February

3	Unit-3	Fish measurement, Lakes & Reservoirs-I: physical characteristics & processes, Roles of hatcheries in fisheries management	March
4	Unit-4	Lakes & Reservoirs-II: sampling fishes & plankton, Stream and lake reclamation, Fishes: handling & transport	April

Dr. Kavita Sharma (Assistant Professor, Deptt. of Science)

Date: 26/11/2025

GAUR BRAHMAN DEGREE COLLEGE, ROHTAK

Subject Name: DEVELOPMENTAL BIOLOGY

Zoology

Subject Code: Paper - II

Sr.No	Unit	Lesson Plan: Batchelor of Life Science: 2025-26 (Semester-6th)	Month
		Theory & Practical	
1	Unit-1	1. Historical perspectives, aims and scope of developmental biology. 2. Generalized structure of mammalian ovum&sperm. Spermatogenesis and Oogenesis.	January

2	Unit-2	1. Fertilization, parthenogenesis, different types of eggs and patterns of cleavage in invertebrates and vertebrates. 2. Process of blastulation in invertebrates and vertebrates 3. Fate-map construction in frog and chick.	February
3	Unit-3	1. Gastrulation in invertebrates and vertebrates 2. Gastrulation&formation of three germinal layers in frog and chick. 3. Elementary knowledge of primary organizers.	March
4	Unit-4	1. Extra embryonic membranes: structure&significance in birds and mammals. 2. Concepts of competence, determination and differentiation. 3. Concept of regeneration.	April

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