

Government PG College, Ambala Cantt.
Subject: Zoology Name of Teacher : Dr. Tarsem Kumar
Lesson Plan Session 2022-23 Class: B.Sc. 2nd sem.

Month	Details
January 2023	<p>3. Multiple allelism : Eye colour in <i>Drosophila</i>; A, B, O blood group in man.</p> <p>4. Human genetics : Human karyotype, Chromosomal abnormalities involving autosomes and sex chromosomes, monozygotic and dizygotic twins.</p>
February 2023	<p>3. Elements of Heredity and variations.</p> <p>4. The varieties of gene interactions</p>
March 2023	<p>7. Sex linked inheritance : Haemophilia and colour blindness in man, eye colour in <i>Drosophila</i>, Non-disjunction of sex-chromosome in <i>Drosophila</i>; Sex-linked and sex-influenced inheritance</p>
April 2023	<p>5. Linkage and recombination : Coupling and repulsion hypothesis, crossing-over and chiasma formation; gene mapping.</p> <p>6. Sex determination and its mechanism : male and female heterozygous systems, genetic balance system; role of Y-chromosome, male haploidy, cytoplasmic and environmental factors, role of hormones in sex determination.</p>
May 2023	<p>8. Extra chromosomal and cytoplasmic inheritance:</p> <p>i) Kappa particles in <i>Paramecium</i></p> <p>ii) Shell coiling in snails.</p> <p>iii) Milk factor in mice.</p>



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Lesson Plan Session 2022-23 Class: B.Sc. 4th sem.

Month	Deatils
January 2023	1. Circulation: Origin, conduction and regulation of heart beat, cardiac cycle, electrocardiogram, cardiac output, fluid pressure and flow pressure in closed and open circulatory system; Composition and functions of blood & lymph; Mechanism of coagulation of blood, coagulation factors; anticoagulants, haemopoiesis.
February 2023	2. Respiration: Exchange of respiratory gases, transport of gases, lung air volumes, oxygen dissociation curve of hemoglobin, Bohr's effect, Haburger's phenomenon (Chloride shift), control / regulation of respiration.
March 2023	3. Excretion: Patterns of excretory products viz. Amonotelic, ureotlic uricotelic, ornithine cycle (Kreb's – Henseleit cycle) for urea formation in liver. Urine formation, counter-current mechanism of urine concentration, osmoregulation, micturition.
April 2023	4. Neural Integration: Nature, origin and propagation of nerve impulse alongwith meddullated & non-medullated nerve fibre, conduction of nerve impulse across synapse. 5. Chemical integration of Endocrinology: Structure and mechanism of hormone action; physiology of hypothalamus, pituitary, thyroid, parathyroid, adrenal, pancreas and gonads. Class Test
May2023	6. Reproduction: Spermatogenesis, Capacitation of spermatozoa, ovulation, formation of corpus luteum, oestrous-anoestrous cycle, Menstrual cycle in human; fertilization, implantation and gestation.



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Lesson Plan Session 2022-23 Class: B.Sc. 6th sem.

Month	Details
January 2023	Introduction to world fisheries: Production, utilization and demand. 2. Fresh Water fishes of India: River system, reservoir, pond, tank fisheries; captive and culture fisheries, cold water fisheries.
February 2023	3. Fishing crafts and gears. 4. Fin fishes, Crustaceans, Molluscs and their culture. 5. Sugercane: (a) Sugercane leaf-hopper (<i>Pyrilla perpusilla</i>) (b) Sugercane Whitefly (<i>Aleurolobus barodensis</i>) (c) Sugercane top borer (<i>Sciropophaga nivella</i>) (d) Sugercane root borer (<i>Emmalocera depresella</i>) (e) Gurdaspur borer (<i>Bissetia steniellus</i>)
March 2023	6. Cotton: (a) Pink bollworm (<i>Pectinophora gossypifolia</i>) (b) Red cotton bug (<i>Dysdercus Cingulatus</i>) (c) Cotton grey weevil (<i>Myllocerus undecimpustulatus</i>) (d) Cotton Jassid (<i>Amrasca devastans</i>) With their systematic position, habits and nature of damage caused. Life cycle and control of <i>Pectinophore gossypiella</i> . <i>Class Test</i>
April 2023	7. Wheat: Wheat stem borer (<i>Sesamia inferens</i>) with its systematics position, habits, nature of damage caused. Life cycle and control. 8. Paddy: (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>Diceladispera armigera</i>) With their systematic position, habits and nature of damage caused. Life cycle and control of <i>Loptocorisa acuta</i> .



May2023

9. Vegetables:

- (a) *Raphidopalpa faveicollis* – The Red pumpkin beetle.
- (b) *Dacus cucurbitas* – The pumpkin fruit fly.
- (c) *Tetranychus tecarius* – The vegetable mite.
- (d) *Epilachna* – The Hadda beetle

