Lesson Plan 2022-23 Even semester

Class : B.Sc. (Med.) 6th Semester (Theory)

Subject lesson plan: From Feb 2022 to April 2023

Teachers: Dr. Santosh Hooda, Mrs Anu Bhargava, Mrs Babli Rathee

Week & Date	Topics
Week 1	Study of insect pests of crops and vegetables.
Week 2	Pest of Sugarcane, Pest of Cotton, Pest of Wheat
Week 3	Pest of Paddy, Pest of Vegetables, Pest of Stored grains
Week 4	Insect control: Biological control, its history, requirement and precautions and feasibility of biological agents for control.
Week 5	Chemical control: History, Categories of pesticides. Important pesticides from each category to pests against which they can be used. Insect repellants and attractants.
Week 6	Integrated pest management, Important bird and rodent pests of agriculture & their management.
Week 7	Historical perspectives, aims and scope of developmental biology. Generalized structure of mammalian ovum & sperm. Spermatogenesis and Oogenesis
Week 8	Fertilization, parthenogenesis, different types of eggs and patterns of cleavage in invertebrates and vertebrates. Process of blastulation in invertebrates and vertebrates, Fate-map construction in frog and chick.
Week 9	Gastrulation in invertebrates and vertebrates. Gastrulation & formation of three germinal layers in frog and chick.. Elementary knowledge of primary organizers
Week 10	Extra embryonic membranes: structure & significance in birds and mammals. Concepts of competence, determination and differentiation. Concept of regeneration
Week 11	Revision

Lesson Plan 2022-23 Even Semester

Class : B.Sc. (Med.) 2nd Semester (Theory)
Subject lesson plan: From Feb 2023 to April 2023
Teachers: Mrs Mamta Khokhar, Mrs Anu Bhargava, Mrs Babli Rathee

Week & Date	Topics
Week 1	Phylum - Annelida: General characters and classification,Biodiversity and economic importance ,Type study – Pheretima, Metamerism, Trochophore larva:.Affinities, evolutionary significance
Week 2	Phylum – Arthropoda : General characters and classification , Biodiversity and economic importance , Type study – Periplaneta
Week 3	Phylum - Mollusca: General characters and classification, Biodiversity and economic importance, Type study – Pila, Torsion and detorsion in gastropoda .
Week 4	Phylum - Echinodermata: General characters and classification , Biodiversity and economic importance, Type Study -Asteries (Sea Star), Echinoderm larvae, Aristotle's Lantern
Week 5	Phylum – Hemichordata: Type study: Balanoglossus Elements of Heredity and variations,The varieties of gene interactions , Linkage and recombination: Coupling and repulsion hypothesis, crossing-over and chiasma formation; gene mapping
Week 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.
Week 7	Sex linked inheritance: Haemophilia and colour blindness in man, eye colour in Drosophila, Nondisjunction of sex-chromosome in Drosophila; Sex-linked and sex influenced inheritance. Extra chromosomal and cytoplasmic inheritance: i) Kappa particles in Paramecium. ii) Shell coiling in snails. iii) Milk factor in mice
Week 8	Multiple allelism: Eye colour in Drosophila; A, B, 0 blood group in man. Human genetics: Human karyotype, Chromosomal abnormalities involving autosomes and sex chromosomes, monozygotic and dizygotic twins. Inborn errors of metabolism .
Week 9	Nature and function of genetic material; Structure and type of nucleic acids; Protein synthesis. spontaneous and induced (chemical and radiations) mutations; Gene mutations; chemical basis of mutations; transition, transversion, structural chromosomal aberrations ;numerical aberrations.
Week 10	Applied genetics: Eugenics, euthenics and euphenics; genetic counseling, pre-natal diagnostics, DNA-finger printing, transgenic animals
Week 11	**Revision**

Lesson Plan 2022-23 Even semester

Class : B.Sc. (Med.) 4th Semester (Theory)
Subject lesson plan: From Feb 2023 to April 2023
Teachers: Dr. Radha Rathee, Mrs. Madhuri Kaushik

	Topics
Week 1	Amphibia: Origin, Evolutionary tree. Type study of frog (Rana tigrina), Parental Care in Amphibia
Week 2	Reptilia: Type study of Lizard (Hemidactylus), Origin, Evolutionary tree. Extinct reptiles; Poisonous and non-poisonous snakes; Poison apparatus in snakes
Week 3	Aves: Type study of Pigeon (Columba livia); Flight adaptation, Principles of aerodynamics in Bird flight, migration in birds.
Week 4	Mammals: Classification, type study of Rat; Adaptive radiations of mammals and dentition.
Week 5	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, haempoiesis
Week 6	Respiration: Exchange of respiratory gases, transport of gases, lung air volumes, oxygen dissociation curve of hemoglobin, Bohr's effect, Hamburger's phenomenon (Chloride shift), control / regulation of respiration.
Week 7	Excretion: Patterns of excretory products viz. Amonotelic, ureotlic uricotelic, ornithine cycle (Kreb's– Henseleit cycle) for urea formation in liver. Excretion: Urine formation, counter-current mechanism of urine concentration, osmoregulation, micturition
Week 8	Neural Integration: Nature, origin and propagation of nerve impulse along with medullated & non-medullated nerve fibre, conduction of nerve impulse across synapse.
Week 9	Chemical integration of Endocrinology: Structure and mechanism of hormone action Physiology of hypothalamus, pituitary, thyroid, parathyroid, adrenal, pancreas and gonads. Reproduction: Spermatogenesis.
Week 10	Capacitation of spermatozoa, ovulation, formation of corpus luteum,Oestrous-anoestrous cycle, Menstrual cycle in human; fertilization, implantation and gestation.
Week 11	**Revision**