Lesson Plan (Odd Semester)

Class:B.Sc Final year (5th Semester)Medical 2023-24

Teacher's Name : Dr. Poonam

Subject-Zoology

Week	Name of the Topic
1st week	Introduction to world fisheries: Production, utilization and demand.
2nd week	Fresh Water fishes of India: River system, Reservoir, pond, tank fisheries.
3rd week	Captive and culture fisheries, cold water fisheries. **Revision and Test**
4th week	Fishing crafts and gears.
5th week	Fin fishes, Crustaceans, Molluscs and their culture. Seed production: Natural seed resources – its assessment, collection, Hatchery production.
6th week	Nutrition: Sources of food (Natural, Artificial) and feed composition (Calorie and Chemical ingredients).
7th week	Field Culture: Ponds-running water, recycled water, cage, culture; poly culture.
8th week	Culture technology: Biotechnology, gene manipulation and cryopreservation of gametes. **Revision and Test**
9th week	Basic concepts of ecology: Definition, significance. Concepts of habitat and ecological niche.
10th week	Factors affecting environment: Abiotic factors (light-intensity, quality and duration)
11th week	Temperature, humidity, topography; edaphic factors; biotic factors. Ecosystem: Concept, components, properties and functions.
12th week	Ecological energetic and energy flow-food chain, food web, trophic structure; ecological pyramids concept of productivity.
13th week	**Revision and Test**
14th week	Biogeochemical cycles: Concept, reservoir pool, gaseous cycles and sedimentary cycles. Population: Growth and regulation.
15th week	Origin of life. Concept and evidences of organic evolution.
16th week	Theories of organic evolution. Concept of microevolution and concept of species
17th week	Concept of macro-and mega-evolution. Phylogeny of horse. Evolution of man.
18th week	**Revision and Test**

Lesson Plan (Odd Semester)

Class:B.Sc Second year (3rd Semester) Medical 2023-24

Teacher's Name : Dr. Poonam

Subject-Zoology

Week	Name of the Topic
1st week	Chordates: Principles of classification; Origin and Evolutionary tree.Role of amnion in evolution; Salient features of chordates; Functional morphology of the types with examples emphasizing their biodiversity,
2nd week	General characters and classification of phyla upto orders with examples emphasizing their biodiversity, economic importance and conservation measures where required.
3rd week	Protochordates: Systematic position, distribution, ecology, morphology and affinities, economic importance and conservation measures where required.
4th week	Urochoradata: Type study of Herdmania.
5th week	Cephalochordata: Type study of Amphioxus.
6th week	Introduction, Classification, Structure, function and general properties of carbohydrates and lipids.
7th week	Introduction, Classification, Structure, function and general properties of proteins; Nomenclature, Classification and mechanisms of enzyme action.
8th week	Transport through biomembranes (Active and Passive), buffers.
9th week	General characters and classification of phyla upto orders.
10th week	Type study of Petromyzon.
11th week	General characters and classification of all phyla upto orders.
12th week	Pisces: Types study of Labeo.
13th week	**Revision and Test**
14th week	Nutrition: Nutritional components; Carbohydrates, fats, lipids, Vitamins and Minerals. Types of nutrition & feeding,
15th week	Muscles: Types of muscles, ultra-structure of skeletal muscle.
16th week	Bio-chemical and physical events during muscle contraction; single muscle twitch, tetanus, muscle fatigue muscle, tone, oxygen debt
17th week	Muscle : Cori's cycle, single unit smooth muscles, their physical and functional properties
18th week	Bones: Structure and types, classification, bone growth and resorption, effect of ageing on skeletal system and bone disorder
19th week	**Revision and Test**

Lesson Plan 2023-24 (Odd Sem)

Class:B.Sc First year (1st sem)Medical

Teacher's Name : Dr. Poonam

Subject-Zoology

Week	Name of the Topic
1st week	General characters and classification up to order level, Biodiversity and economic importance of Phylum Protozoa -
2nd week	Type study of Plasmodium
3rd week	Parasitic protozoans: Life history, mode of infection and pathogenicity of Entamoeba.
4th week	Life history, Mode of infection and pathogenicity of Trypanosoma, Leishmania and Giardia.
5th week	General characters and classification up to order level , Biodiversity and economic importance of Phylum Porifera
6th week	Type study - Sycon.
7th week	Canal system in sponges, Spicules in sponges
8th week	Ultrastructure of different cell organelles of animal cell. Plasma Membrane: Fluid mosaic model, various modes of transport across the membrane, mechanism of active and passive transport, endocytosis and exocytosis.
9th week	Endoplasmic reticulum (ER): types, role of ER in protein synthesis and transportation in animal cell.
10th week	Goigi complex: Structure, Associated enzymes and role of golgi-complex in animal cell
11th week	General characters and classification up to order level. Biodiversity, economic importance. Type Study – Obelia
12th week	Corals and coral reefs. Polymorphism in Siphonophore, Cytoskeleton: Microtubules, microfilaments, centriole and basal body. Cilia and Flagella. Ultrastructure and functions of Nucleus.
13th week	**Test**
14th week	Ribosomes: Types, biogenesis and role in protein synthesis. Lysosomes: Structure, enzyme and their role; polymorphism, Mitochondria.
15th week	Helminths parasites: Brief account of life history, mode of infection and pathogenesity of Schistosoma, Ancylostoma, Trichinella, Wuchereria and Oxyuris
16th week	Euchromatin and heterochromatin, lampbrush chromosomes and polytene chromosomes.
17th week	Mitosis and Meiosis (Cell reproduction). Brief account of causes of Cancer.
18th week	An elementary idea of cellular basis of Immunity
19th week	**Revision and Test**