**Lesson Plan 2021-22 (Odd Sem)**

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

Teacher’s Name : Mrs. Mamta Khokhar, Dr. Radha Rathee, Mrs. Anu Bhargava

Subject-Zoology

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| **Week** | **Name of the Topic** |
| Oct:01 to 09 | General characters and classification up to order level, Biodiversity and economic importance of Phylum Protozoa |
| Oct :11 to 16 | Type study of Plasmodium |
| Oct : 18 to 23  | Parasitic protozoans: Life history, mode of infection and pathogenicity of Entamoeba.  |
| Oct: 25 to 30 | Life history, Mode of infection and pathogenicity of Trypanosoma, Leishmania and Giardia. |
| Nov: 01 to 06 | **Diwali vacations** |
| Nov: 08 to 13 | General characters and classification up to order level , Biodiversity and economic importance of Phylum Porifera |
| Nov: 15 to 20 | Type study - Sycon. |
| Nov: 22 to 30  | Canal system in sponges, Spicules in sponges |
| Dec : 01 to 04  | 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. |
| Dec: 06 to 11 | Endoplasmic reticulum (ER): types, role of ER in protein synthesis and transportation in animal cell. |
| Dec : 13 to 18 | Goigi complex: Structure, Associated enzymes and role of golgi-complex in animal cell |
| Dec :20 to 25 | General characters and classification up to order level. Biodiversity, economic importance. Type Study – Obelia |
| Dec : 27 to 31 | Corals and coral reefs. Polymorphism in Siphonophore, Cytoskeleton: Microtubules, microfilaments, centriole and basal body. Cilia and Flagella. Ultrastructure and functions of Nucleus. |
| January 1st | **Test** |
| Jan: 3 to 8 | Ribosomes: Types, biogenesis and role in protein synthesis. Lysosomes: Structure, enzyme and their role; polymorphism, Mitochondria. |
| Jan: 10 to 15 | Helminths parasites: Brief account of life history, mode of infection and pathogenesity of Schistosoma, Ancylostoma, Trichinella, Wuchereria and Oxyuris |
| Jan: 17 to 22 | Euchromatin and heterochromatin, lampbrush chromosomes and polytene chromosomes. |
| Jan: 24to31  | Mitosis and Meiosis (Cell reproduction). Brief account of causes of Cancer.  |
|  Feb: 01to 05 | An elementary idea of cellular basis of Immunity |
|  Feb 7 onwards | **Revision and Test** |

**Lesson Plan (Odd Semester)**

**Class: B.Sc Second year (3rd Semester) Medical 2021-22**

**Teacher’s Name: Dr. Seema Jain, Mrs. Madhuri Kaushik , Ms. Babli Rathee**

**Subject-Zoology**

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| **Week** | **Name of the Topic** |
| Oct:01 to 09 | 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,  |
| Oct :11 to 16 | General characters and classification of phyla upto orders with examples emphasizing their biodiversity, economic importance and conservation measures where required. |
| Oct : 18 to 23  |  Protochordates: Systematic position, distribution, ecology, morphology and affinities, economic importance and conservation measures where required. |
| Oct: 25 to 30 | Urochoradata: Type study of Herdmania. |
| Nov: 01 to 06 | **Diwali Vacations** |
| Nov: 08 to 13 | Cephalochordata: Type study of Amphioxus. |
| Nov: 15 to 20 | Introduction, Classification, Structure, function and general properties of carbohydrates and lipids. |
| Nov: 22 to 30  | Introduction, Classification, Structure, function and general properties of proteins; Nomenclature, Classification and mechanisms of enzyme action. |
| Dec : 01 to 04  | Transport through biomembranes (Active and Passive), buffers.  |
| Dec: 06 to 11 | General characters and classification of phyla upto orders. |
| Dec : 13 to 18 |  Type study of Petromyzon. |
| Dec :20 to 25 | General characters and classification of all phyla upto orders. |
| Dec : 27 to 31 | Pisces: Types study of Labeo. |
| January 1st | **Revision and Test**  |
| Jan: 3 to 8 | Nutrition: Nutritional components; Carbohydrates, fats, lipids, Vitamins and Minerals. Types of nutrition & feeding, |
| Jan: 10 to 15 | Muscles: Types of muscles, ultra-structure of skeletal muscle. |
| Jan: 17 to 22 | Bio-chemical and physical events during muscle contraction; single muscle twitch, tetanus, muscle fatigue muscle, tone, oxygen debt |
| Jan: 24to31  | Muscle : Cori’s cycle, single unit smooth muscles, their physical and functional properties |
|  Feb: 01to 05 | Bones: Structure and types, classification, bone growth and resorption, effect of ageing on skeletal system and bone disorder |
|  Feb 7 onwards | **Revision and Test** |

**Lesson Plan (Odd Semester)**

 **Class: B.Sc Final year (5th Semester) Medical 2021-22**

**Teacher’s Name: Dr. Santosh Hooda, Mrs. Manju Chhikara**

**Subject-Zoology**

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| **Week** | **Name of the Topic** |
| Oct:01 to 09 | Introduction to world fisheries: Production, utilization and demand. |
| Oct :11 to 16 | Fresh Water fishes of India: River system, Reservoir, pond, tank fisheries. |
| Oct : 18 to 23  | Captive and culture fisheries, cold water fisheries. **Revision and Test** |
| Oct: 25 to 30 | Fishing crafts and gears. |
| Nov: 01 to 06 | **Diwali Vacations** |
| Nov: 08 to 13 | Fin fishes, Crustaceans, Molluscs and their culture. Seed production: Natural seed resources – its assessment, collection, Hatchery production. |
| Nov: 15 to 20 | Nutrition: Sources of food (Natural, Artificial) and feed composition (Calorie and Chemical ingredients). |
| Nov: 22 to 30  | Field Culture: Ponds-running water, recycled water, cage, culture; poly culture. |
| Dec : 01 to 04  | Culture technology: Biotechnology, gene manipulation and cryopreservation of gametes. **Revision and Test** |
| Dec: 06 to 11 | Basic concepts of ecology: Definition, significance. Concepts of habitat and ecological niche.  |
| Dec : 13 to 18 | Factors affecting environment: Abiotic factors (light-intensity, quality and duration) |
| Dec :20 to 25 | Temperature, humidity, topography; edaphic factors; biotic factors. Ecosystem: Concept, components, properties and functions. |
| Dec : 27 to 31 | Ecological energetic and energy flow-food chain, food web, trophic structure; ecological pyramids concept of productivity. |
| January 1st | **Revision and Test** |
| Jan: 3 to 8 | Biogeochemical cycles: Concept, reservoir pool, gaseous cycles and sedimentary cycles. Population: Growth and regulation. |
| Jan: 10 to 15 | Origin of life. Concept and evidences of organic evolution. |
| Jan: 17 to 22 | Theories of organic evolution. Concept of microevolution and concept of species |
| Jan: 24 to31  | Concept of macro-and mega-evolution. Phylogeny of horse. Evolution of man. |
|  Feb: 01to 05 | **Revision and Test** |
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