Government College For Women, Mahendragarh

Department Of ZOOLOGY- Session : 2024-25

Name Of The Assistant Professor : Praveen Saroha

Class : B.Sc.1st - Semester I

Lesson Plan

Week -1

Protozoa

i) General characters and classification up to class level ii) ii) Type study of

Plasmodium;

Week -2

- Porifera:

i) General characters and classification up to class level

ii) Type study - Sycon.

Week -3

Coelentrata:

i) General characters and classification up to class level

ii) Type Study - Obelia

Week -4

Phylum - Helminths:

i) General characters and classification up to class level ii) Type study - Fasciola hepatica

Week 5

Phylum – Annelida:

General characters and classification up to class level

Type study – Pheretima (Earthworm)

Week-6

Phylum – Arthropoda:

General characters and classification up to class level

Type study – Periplaneta

Week-7

Phylum – Mollusca:

General characters and classification up to class level

Type study – Pila

Week-8

Phylum – Echinodermata:

General characters and classification up to class level

Type Study -Asteries (Sea Star)

Week -9

Phylum – Hemichordate

General characters

Type study: Balanoglossus

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Name Of The Assistant Professor : Praveen Saroha

Class : B.Sc.1st. Semester III

Lesson Plan

Week-1

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, economic

importance and conservation measures where required.

Week -2

General characters and classification of phyla upto orders with examples emphasizing their

biodiversity, economic importance and conservation measures where required.

Protochordates: Systematic position, distribution, ecology, morphology and affinities

Urochordata: Herdmania – type study

Cephalochordata; Amphioxus – type study

Week-3

General characters and classification of phyla upto orders with examples emphasizing their

biodiversity, economic importance and conservation measures where required.

Cyclostomes: Classification and ecological significance

Type study of Petromyzon

Week-4

General characters and classification of all phyla upto orders with examples emphasizing their

biodiversity, economic importance and conservation measures where required.

Pisces: Scales & Fins, Parental care in fishes, fish migration.

Week -5

Types study of Labeo

Note: Type study includes detailed study of various systems of the animal.

Introduction, Classification, Structure, function and general properties of carbohydrates and lipids.

Week-6

Introduction, Classification, Structure, function and general properties of proteins; Nomenclature,

Classification and mechanisms of enzyme action.

Transport through biomembranes (Active and Passive), buffers

Week-7

Nutrition: Nutritional components; Carbohydrates, fats, lipids, Vitamins and Minerals. Types of

nutrition & feeding, Digestion of dietary constituents, viz. lipids, proteins, carbohydrates

& nucleic acids; symbiotic digestion. Absorption of nutrients & assimilation; control of

enzyme secretion.

Week 8

Muscles: Types of muscles, ultra-structure of skeletal muscle. Bio-chemical and physical events

During muscle contraction; single muscle twitch, tetanus, muscle fatigue muscle, tone,

Week -9

Oxygen debt., Cori's cycle, single unit smooth muscles, their physical and functional Properties.

Bones: Structure and types, classification, bone growth and resorption, effect of ageing on skeletal

System and bone disorders.

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Department Of ZOOLOGY Session : 2024-25

Name Of The Assistant Professor : Praveen Saroha

Class : B.Sc. Semester V

Lesson Plan

Week-1

1.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.

Week 2

Fishing crafts and gears.

4. Fin fishes, Crustaceans, Molluscs and their culture.

Week-3

Seed production: Natural seed resources – its assessment, collection, Hatchery production.

Nutrition: Sources of food (Natural, Artificial) and feed composition (Calorie and Chemical Ingredients).

Week 4

3 Field Culture: Ponds-running water, recycled water, cage, culture; poly culture.

4. Culture technology: Biotechnology, gene manipulation and cryopreservation of Gametes.

WEEK 5

1. Basic concepts of ecology: Definition, significance. Concepts of habitat and Ecological niche.

2 Factors affecting environment: Abiotic factors (light-intensity, quality and duration), Temperature, humidity, topography; edaphic factors; biotic factors.

WEEK 6

Ecosystem: Concept, components, properties and functions; Ecological energetics and Energy flow-food chain, food web, trophic structure; ecological pyramids concept of Productivity.

WEEK -7

1. Biogeochemical cycles: Concept, reservoir pool, gaseous cycles and sedimentary cycles.
2. Population: Growth and regulation.

WEEK 8

Origin of life.

1. Concept and evidences of organic evolution.
2. Theories of organic evolution.
3. Concept of microevolution and concept of species

WEEK 9

1.Concept of macro-and mega-evolution.

2.Phylogeny of horse.

3.Evolution of man.