

B.Sc. (Hons) Zoology
SEMESTER - V
PAPER-502
ORGANIC EVOLUTION

July

Week 3

Unit I – Theories of Evolution

Concept of Evolution;

Week 4

Origin of Life;

August

Week 1

Evidences in favour of Evolution;

Week 2

Theories of Evolution viz, Lamarckism, Wiedersheim's theory of continuity of Germ Plasam,

Week 3

Neo-Lamarckism, Darwinism and Modern Synthetic Theory of Evolution

Week 4

Unit II – Mechanism of Evolution

Sources of variability amongst populations; Mutations;

Week 5

Isolation; Natural Selection;

September

Week 1

Hardy – Weinberg Principle; Speciation

Week 2

types of Speciation; Micro and Macro Evolution

Week 3

Unit III – Results of Evolution

Structural and Functional Adaptations;

Week 4

Mimicry and protective coloration;

October

Week 1

Zoo-Geographical Distribution of animal species (Realms)

Week 2

Unit IV – Paleontology

Fossils – Formation,

Week 3

Kinds,

Week 4

Interpretation,

Week 5

Age and significance;

November

Week 1

Evolution of Man.

Week 2 onwards

Revision

B.Sc. (Hons) Zoology
SEMESTER-V
PAPER-503
IMMUNOLOGY-I

July

Week 3

Unit I

Overview of Immune system

Historical perspective of Immunology,

Week 4

Early theories of Immunology.

August

Week 1

Components of immune system

Innate,

Week 2

Adaptive (cell mediated and humoral) –

Week 3

Passive: Artificial and Natural Immunity, Active: Artificial and Natural Immunity.

Week 4

Unit II

Cells and Organs of the Immune System

Haematopoiesis, role of haematopoietic factors

Week 5

Cells of the immune system

September

Week 1

Organs of the Immune system: Primary

Week 2

Secondary lymphoid organs, Lymphatic system.

Week 3

Unit III

Antigens

Antigenicity and immunogenicity,

Week 4

Immunogens, Adjuvants and Haptens,

October

Week 1

Factors influencing immunogenicity, B and T-cell epitopes.

Week 2

Unit IV

Immunoglobulins

Structure and Functions,

Week 3

Basic structure, deducing antibody structure, classes and function,

Week 4

Antigenic determinants on immunoglobulins, Antigen-antibody interactions,

Week 5

Polyclonal sera, Monoclonal antibodies,

November

Week 1

Hybridoma technology.

Week 2 onwards

Revision and test

Lesson Plan 2018 Mrs Shweta Yadav
B.Sc. (Hons) Zoology
SEMESTER - III
PAPER-303
ANIMAL PHYSIOLOGY & HISTOLOGY –II

July

Week 3

Unit I

Excretory System

Histology of kidney, ureter and bladder

Week 4

Renal blood supply

August

Week 1

Mechanism and regulation of urine formation

Week 2

Regulation of acid-base balance

Week 3

Unit II

Nervous System

General organization, Neuron resting membrane potential and its basis

Week 4

Origin of action potential and its propagation in myelinated and unmyelinated nerve fibers;

Week 5

Synaptic transmission and types of synapsis

September

Week 1

Neuro-muscular junction, Reflex activity-reflex arc

Week 2

Types of reflexes, Physiology of hearing and vision

Week 3

Unit III

Reproductive System

Histology of male and female reproductive systems, Puberty,

Week 4

physiology of male and female reproduction

October

Week 1

Methods of contraception (depicted through flow chart).

Week 2

Unit IV

Endocrine System

Structure, histology and functions of endocrine glands

Week 3

Hypothalamus- principal nuclei involved in control of endocrine system,

Week 4

control of anterior pituitary hormones by hypothalamic releasing hormones (neuroendocrine mechanisms);

Week 5

Effects of abnormal secretions of hormones;

November

Week 1

Placental hormones

Week 2 onwards

Revision

B.Sc. (Hons) Zoology
SEMESTER-V
PAPER-503
IMMUNOLOGY-I

Unit I

Overview of Immune system

Historical perspective of Immunology, Early theories of Immunology.

Components of immune system

Innate, Adaptive (cell mediated and humoral) - Passive: Artificial and Natural Immunity, Active: Artificial and Natural Immunity.

Unit II

Cells and Organs of the Immune System

Haematopoiesis and role of haematopoietic factors, Cells of the immune system, Organs of the Immune system:

Primary and Secondary lymphoid organs, Lymphatic system.

Unit III

Antigens

Antigenicity and immunogenicity, Immunogens, Adjuvants and Haptens, Factors influencing immunogenicity, B and

T-cell epitopes.

Unit IV

Immunoglobulins

Structure and Functions, Basic structure, deducing antibody structure, classes and function, Antigenic determinants on

immunoglobulins, Antigen-antibody interactions, Polyclonal sera, Monoclonal antibodies, Hybridoma technology.