Lesson Plan-Ms. Suman

B. Sc. SEMESTER – III

PAPER 3.2

MAMMALIAN PHYSIOLOGY – I

JULY, 2018

Week 3 (July 16-21)

UNIT-I

Introduction, Classification of carbohydrates

AUGUST, 2018

Week 1 (July 30-August 4)

Structure of carbohydrate

Week 2 (August 6-11)

Function and general properties of carbohydrates

Week 3 (August 13-18)

Structure of lipids.

Week 4 (August 20-25)

Function and general properties of lipids.

Week 4 (August 27-30)

Discussion and test

SEPTEMBER, 2018

Week 1 (September 3-8)

UNIT-II

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

Week 2 (September 10-15)

Nomenclature, Classification of enzyme

Week 3 (September 17-22)

Mechanisms of enzyme action.

Week 4 (September 24-29)

Transport through biomembranes (Active and Passive), buffers

OCTOBER 2018

Week 1(October 1-6)

UNIT-III

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

Week 2 (October 8-13)

Types of nutrition & feeding, Digestion of dietary constituents, viz. lipids, proteins, carbohydrates & nucleic acids;

Week 3 (October 15-20)

symbiotic digestion. Absorption of nutrients & assimilation;

Week 4 (October 22-27)

Absorption of nutrients & assimilation; control of enzyme secretion.

NOVEMBER 2018
Week 1(October 29- November 3)
UNIT-IV
Muscles: Types of muscles, ultra-structure of skeletal muscle.
Week 2 (November 5-10)
Bio-chemical and physical
events during muscle contraction; single muscle twitch, tetanus**,** muscle fatigue muscle, tone,
Week 3 (November 12-15)
oxygen debt., Cori's cycle,single unit smooth muscles, their physical and functional properties.

Lesson Plan-Ms. Suman

B.Sc. (Hons) Zoology
SEMESTER – I; PAPER-101
INTRODUCTION TO BIOLOGY

JULY 2018
Week 3 (July 16-21)
UNIT 1:
Early earth and the origin of life;
Week 4 (July 23-28)
Major events in the history of life

AUGUST 2018
Week 1 (July 30-August 4)
a. Introduction to concepts of biology: Themes in the study of biology; A closer look at ecosystem; A closer look at cell; The process of Science; Biology and everyday life
Week 2 (August 6-11)
b. Evolutionary history of biological diversity, Early earth and the origin of life;
Major events in the history of life;
Week 3 (August 13-18)
Mechanism of Macroevolution; Phylogeny and the tree of life
Week 4 (August 20-25)
Classifying the diversity of life, Kingdoms of Life –Prokaryotes, Eukaryotes, Archaea

SEPTEMBER 2018
UNIT II
Week 1 (September 3-8)
Darwinian view of life and origin of species, Darwin's theory of evolution; The evolution of populations; Concepts of species;
Week 2 (September 10-15)
Mechanism of speciation Genetic approach to Biology, Patterns of inheritance and question of biology; Variation on Mendel's Law; The molecular basis of genetic information;
Week 3 (September 17-22)
The flow of genetic information from DNA to RNA to protein; Genetic Variation; Methodologies used to study genes and gene activities;
Week 4 (September 24-29)
Developmental noise; Detecting macromolecules of genetics; Model organisms for the genetic analysis; Distinction between Phenotype and Genotype

OCTOBER 2018
Week 1(October 1-6)
UNIT III
Chemical context of living systems
Chemistry of life, The constituents of matter; Structure of an atom; The energy level of electron;
Week 2 (October 8-13)
The formation and function of molecules depend on chemical bonding between atoms;

Week 3 (October 15-20)
Chemical reaction make or break chemical bonds Water and life,
Week 4 (October 22-27)
The water molecule is polar; Properties of water; Ionization of water

NOVEMBER 2018
Week 1(October 29- November 3)
UNIT IV
Carbon and life, Organic chemistry-the study of carbon compounds; What makes carbon special?
Week 2 (November 5-10)
Properties of organic compounds. Structure and function of biomolecules - Most macromolecules are Polymers; Carbohydrates act as fuel and building materials;
Week 3 (November 12-15)
Lipids are group of hydrophobic molecules;
Protein have diverse structures and functions; Nucleic acids store and transmit hereditary information

Lesson Plan-Ms. Suman

B.Sc. (Hons) Zoology
SEMESTER – I; PAPER-103
BIODIVERSITY-II: NON-CHORDATA

JULY 2018

Week 3 (July 16-21)
Unit I
Phylum Annelida
General characters and outline
Week 3 (July 16-21)
classification of different phyla:
General characters and outline classification

AUGUST 2018
Week 1(July 30-August 4)
Adaptive radiations in Polychaeta.
Week 2 (August 6-11)
Adaptive radiations in Polychaeta.
Week 3(August 13-18)
Type study of *Leech*: Structure and life history
Week 4 (August 20-25)
Type study of *Leech*: Structure and life history

SEPTEMBER 2018
Week 1(September 3-8)
Unit II
Phylum Arthropoda
General characters and outline classification.
Week 2 (September 10-15)
Larval forms of crustacea; social life,
Week 3 (September 17-22)
moulting and metamorphosis in Insecta; vision in Arthropoda.
Week 4 (September 24-29)
Type study of Scorpion: Structure and life history
Affinities of **Onychophora**

OCTOBER 2018
Unit III
Week 1 (October 1-6)
Phylum Mollusca
General characters and outline classification
Week 2 (October 8-13)
Torsion and detorsion;

Week 3 (October 15-20)
modifications of shell and foot
Week 4 (October 22-27)
Type study of *Pila*:Structure and life history

NOVEMBER 2018

Unit IV
Week 1 (October 29- November 3)
Phylum Echinodermata
General characters and outline classification
Week 2 (November 5-10)
Water-vascular system , larval forms**;**
Week 3 (November 12-15)
Type study of *Asterias*: Structure and life history