HP301ID

HP Interdisciplinary Courses (IDC)

3rd Semester

Unit-I:- Physico-chemical Principles and Chemistry of Biomolecules

1. Diffusion. Osmosis, Osmotic Pressure, Hypo and Hypertonic Solution
2. Acid, Base, pH. Buffers-Definition and Biological Significance
3. Chemistry, Classification of Carbohydrates, Proteins and Fats
4. Protein Purification Techniques
5.

Unit-II:- Digestive System and Nutrition

1. Anatomy and Histology of elementary Tract and Digestive Glands
2. Composition and Function of Salivary, Gastric, Pancreatic, Intestinal Juices and Bile
3. Digestion and Absorption of Carbohydrates, Proteins and Fats
4. Physiology of Deglutation and Defection and Physiological Function

Unit-III:- Metabolism

1. Carbohydrate Metabolism- Glycolysis, Pantose Phosphate Pathway (PPP), Glycogenesis, Neoglucogenesis, TCA Cycle
2. Lipid Metabolism- Fatty Acid Biosynthesis, Beta Oxidation
3. Protein Metabolism-Deamination,Transamination, Urea Cycle
4. Nucleic Acid Metabolism- Catabolism of Purine and Pyrimidine, Gout

Unit-IV:- Nutrition

1. Concept of Nutrients
2. Water Soluble Vitamins-source, requirement, deficiency syndrome
3. Fat Soluble Vitamins- source, requirement, deficiency syndrome
4. Bulk and Trace Elements-Physiological roles and Deficiency syndromes, PCM, Hypervitaminosis, Anaemia, Goitre, Obesity