

B.Sc.(N) [Post Basic (1st Year)]

BF/2015/02

Biochemistry & Biophysics

[New Scheme-w.e.f. 2007 admission]

Time : 3 Hours

Max Marks : 75

Note: Attempt all the questions.

USE SEPARATE ANSWER SHEETS FOR EACH SECTION.

SECTION-A (Biochemistry)

[38 marks]

1. (i) (a) Discuss the structure and function of Biochemically important disaccharide. [2]
 (b) Explain the abnormalities of thyroid function. [4]
 (c) Discuss briefly β Oxidation of fatty acid Biosynthesis. [4]
- OR**
- (ii) (a) What are Carbohydrates. [2]
 (b) Explain water and Fluid Balance. [4]
 (c) Glucose tolerance test. [4]
2. (a) Explain the Homeostatic mechanism of body. [2]
 (b) Explain the various factors influencing the digestion. [4]
 (c) Role of Liver in Fat Metabolism. [4]
3. **Write in brief (Any TWO) :** [2x3=6]
 (a) Define essential and non-essential Amino acids (b) Role of nucleic acid in Protein synthesis
 (c) Explain factors affecting enzyme activity (d) Define Intra-cellular and Extra-cellular enzyme
4. **Write Short Notes on any FOUR of the following :** [4x3=12]
 (a) Explain the biosynthesis of Fat.
 (b) What are the Ketone bodies. Explain its utilization.
 (c) Explain the mitochondrial oxidation and oxidative phosphorylation.
 (d) What are the various factors influencing the absorption of enzyme.
 (e) Differentiate between Glycogenesis, Glycogenolysis and Neoglucogenesis.
 (f) Biosynthesis of Proteins in the cells.

SECTION-B (Biophysics)

[37 marks]

1. (i) (a) What do you mean by atmosphere pressure. [2]
 (b) Explain the types of energy. [4]
 (c) What do you mean by static forces. [4]
- OR**
- (ii) (a) What are the forces and energy. [2]
 (b) Describe the effect of Gravitation Forces on human body. [4]
 (c) Application of principles of Forces in Nursing. [4]
2. (a) Explain the specific and centre gravity. [3]
 (b) Explain the defective vision and its correction. [3]
 (c) Describe the frequency and wavelength of light. [3]
3. **Distinguish briefly (Any TWO) :** [2x3=6]
 (a) Velocity and Acceleration (b) EMG and ECT
 (c) Arterial and venous Blood Pressure (d) Ionising Radiation and X-Rays.
4. **Write Short Notes on any FOUR of the following :** [4x3=12]
 (a) MRI Scanning (b) Temperature Scales
 (c) Vocalisation and hearing (d) Resistance and their units
 (e) Structure of Atom (f) Application of frequency and sound in Nursing