

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

BF/2018/08

Biochemistry & Biophysics

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

Time : 3 Hours

Max Marks : 75

Note: 1.) *Attempt all questions.*

2.) *USE SEPARATE ANSWER BOOK FOR EACH PART.*

3.) *The Student must write separate O.P. Code in the space provided on the Title Page of the respective Answer Book.*

SECTION-A

[38 marks]

QP Code: PBN103

(Biochemistry)

1. (i) (a) Define Electrolytes. [2]
 (b) Explain the sources of water in Human Body. [4]
 (c) Write the functions of Sodium and Calcium. [4]
- OR**
- (ii) (a) Define Plasma Proteins. [2]
 (b) Explain the functions of Plasma Proteins. [4]
 (c) Discuss the mechanism of action of enzymes in our Body. [4]
2. **Differentiate between the following :** [2½ x 4=10]
 (a) Acid and Base. (b) Essential and Non-essential Amino acids.
 (c) Hypoglycaemia and Hyperglycemia. (d) Glycolipids and Phospholipids.
3. **Describe brief (Any TWO) :** [2x3=6]
 (a) Protein Biosynthesis. (b) Malabsorption Syndrome.
 (c) Classification of Fats. (d) HDL & LDL.
4. **Write Short Notes on any FOUR of the following :** [4x3=12]
 (a) Monosaccharides.
 (b) Gout.
 (c) Catabolism of Carbohydrates for Energy Purposes.
 (d) Functions of Steroid Hormones.
 (e) Functions of a Human Cell.
 (f) Composition of Blood.

SECTION-B

[37 marks]

QP Code: PBN104

(Biophysics)

1. (i) (a) Define Fundamental Units. [2]
 (b) Explain the units of length, mass and time. [4]
 (c) Discuss the application of principles of Gravity in Nursing. [4]
- OR**
- (ii) (a) Define Body Mechanics. [2]
 (b) Describe the principles of Body Mechanics. [4]
 (c) Discuss the relationship between Pulley and Traction. [4]
2. (a) Define Force. [2]
 (b) Explain the units of measurement of Force and Energy. [4]
 (c) Discuss the application of principles of Lever in Nursing. [3]
3. **Describe briefly (Any TWO) :** [2x3=6]
 (a) Uses of Radioactive Isotopes. (b) X- Rays.
 (c) Arterial and Venous Pressure. (d) Temperature Scales.
4. **Write Short Notes on any FOUR of the following :** [4x3=12]
 (a) Transfer of Heat. (b) Incline Plane.
 (c) Use of Light in Therapy. (d) Use of Heat for Sterilization.
 (e) Pacemaker. (f) Flow of Electricity in Solids.