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

BF/2018/02

# 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 Q.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) Write the functions of Water. [2]
(b) List down the properties of Water. [4]
(c) Explain the mechanism of fluid and electrolyte balance. [4]

**OR**

(ii) (a) Define Carbohydrates. [2]
(b) Write the properties of Carbohydrates. [4]
(c) Explain the mechanism of blood glucose regulation in our Body. [4]

2. (a) Define the Glycolysis. [2]
(b) Describe the process of digestion and absorption of Proteins. [4]
(c) Discuss role of nucleic acid in Protein Synthesis. [4]

3. **Describe brief (Any TWO) :** [2x3=6]
(a) Composition of Urine (b) Functions of Hormones
(c) Lipoproteins. (d) Disaccharides

4. **Write Short Notes on any FOUR of the following :** [4x3=12]
(a) Mitochondrial Oxidation.
(b) Distribution of Cholesterol in Body.
(c) Diagnostic applications of Enzymes.
(d) Unsaturated Fatty Acids.
(e) Glucose Tolerance Test.
(f) Role of Liver in Fat Metabolism.

## SECTION-B [37 marks]

**QP Code: PBN104** **(Biophysics)**

1. (i) (a) Define Acceleration. [2]
(b) Differentiate between specific gravity and centre of gravity. [4]
(c) List the principles of Gravity. [4]

**OR**

(ii) (a) Define Work. [2]
(b) Differentiate between Fundamental and Derived Units. [4]
(c) Write down the principles of Machines. [4]

2. (a) Define the term Specific Heat. [2]
(b) Discuss the effects of heat on Matter. [3]
(c) Describe the Laws of Reflection. [4]

3. **Describe briefly (Any TWO) :** [2x3=6]
(a) Measurement of Heat (b) Intracranial Pressure
(c) Regulation of Body Temperature (d) Use of Ultrasound.

4. **Write Short Notes on any FOUR of the following :** [4x3=12]
(a) Flow of electricity through Electrolytes. (b) Common electronic equipments used in patient ca
(c) Defective vision and its correction. (d) MRI Scanning.
(e) Structure of Atom. (f) Relative humidity and its application in nursing.

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