

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

BF/2013/01

Biochemistry & Biophysics

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

M.M. : 75

Time : 3 Hours.

Note: Attempt all the questions.

Support your answer with neat diagrams and illustrations.

USE SEPARATE ANSWER SHEETS FOR EACH SECTION.

SECTION-A (Biochemistry)

[38 marks]

1. (a) What do you mean by fluid and electrolyte balance ? [1½]
 - (b) Describe the properties of water. [4½]
 - (c) List down the functions of water in human body. [4]
- OR**
1. (a) What are Proteins ? [2]
 - (b) How are proteins digested and absorbed ? [5]
 - (c) Discuss the role of nucleic acids in protein synthesis. [3]
 2. (a) What are enzymes ? [1½]
 - (b) Discuss the factors effecting enzyme activity. [4]
 - (c) List the diagnostic application of enzymes and precautions for handling specimens for enzyme estimation. [4½]
 3. **Distinguish briefly (Any TWO) :** [2x3=6]
 - (a) Glycolipids & Phospholipids.
 - (b) Essential and Non essential amino acids.
 - (c) Intracellular & extra cellular electrolytes.
 - (d) Saturated & Non saturated fats.
 4. **Write Short Notes on any FOUR of the following :** [4x3=12]
 - (a) Synthesis & distribution of Cholesterol.
 - (b) Storage of Glucose in body.
 - (c) ACTH.
 - (d) Urea Cycle.
 - (e) Utilization of Ketone bodies.

SECTION-B (Biophysics)

[37 marks]

1. (a) What is specific heat ? [2]
 - (b) Discuss briefly about relative humidity. [4]
 - (c) Explain various applications of principles of heat in Nursing. [4]
- OR**
1. (a) What is light ? [2]
 - (b) Discuss the laws of reflection. [4]
 - (c) Mention the uses of light in various therapies. [4]
 2. (a) What do you mean by hydrostatic pressure ? Give examples. [2½]
 - (b) Enumerate the uses of radioactive isotopes. [2½]
 - (c) Explain various measurements of pressure within human body. [5]
 3. **Distinguish briefly (Any TWO) :** [2x2½=5]

(a) Speed and Velocity.	(b) Magnetism and Electricity.
(c) Energy and Frequency.	(d) Pulley and Traction.
 4. **Explain any FOUR of the following :** [4x3=12]
 - (a) Defibrillation.
 - (b) EMG.
 - (c) Uses of ultra sound.
 - (d) Electricity and Human Body.
 - (e) X-rays.
 - (f) Use of heat sterilization.
