

F. Y. P. B. B. Sc. (Nursing): *Winter-2021*
SUBJECT : BIOCHEMISTRY & BIOPHYSICS

Day : *Monday*
Date : *25-10-2021* W-2021-5658

Time : *10:00 AM TO 1:00 PM*
Max. Marks : 75

N.B.:

- 1) All questions are **COMPULSORY**.
- 2) Figures to the right indicate **FULL** marks.
- 3) Draw neat and labeled diagram **WHEREVER** necessary.
- 4) Answers to both the sections should be written in **SEPARATE** answer books.

SECTION – I

- Q.1** Write short answers on **ANY FIVE** of the following: [10]
- a) Enlist different classes of enzymes in proper order.
 - b) What is endoplasmic reticulum? Give its types and function.
 - c) Normal range of serum creatinine and condition in which creatinine concentration increases than normal?
 - d) Biomedical importance and functions of lipids.
 - e) What is hyperuricemia? Give conditions of hyperuricemia.
 - f) What is gluconeogenesis?
 - g) What is essential fatty acid? Enlist the names of essential fatty acids.
- Q.2** Write short notes on **ANY FOUR** of the following: [16]
- a) Give the name and normal range of enzymes, estimated for assessment of liver function tests.
 - b) Types and functions of lipoproteins.
 - c) Describe the cell and cell organelle with neat diagram.
 - d) Diagnostic application of enzymes.
 - e) Ketosis
 - f) Clinical significance of blood urea.
 - g) Enlist the reproductive hormones with their function.
- Q.3** Long answer questions (**ANY ONE**): [12]
- a) Define and classify carbohydrates with suitable examples. Add a note on functions of carbohydrates.
 - b) What are proteins? Describe the structural organization of proteins, with its significance.

SECTION – II

- Q.4** Write short answers on **ANY FIVE** of the following: [10]
- a) Differentiate between kinetic energy and potential energy.
 - b) Explain the use of radio isotopes in medicine.
 - c) What are the types of errors? State remedies to minimize error.
 - d) Explain different scales of measurement of temperature.
 - e) Describe the lever and different types of lever.
 - f) State Newton's three laws of motion.
 - g) State the law of electromagnetic induction.
- Q.5** Write short notes on **ANY FOUR** of the following: [16]
- a) What is myopia? How it can be corrected?
 - b) Enumerate the use of radioisotopes and X-rays.
 - c) Explain the physiological effect of heat.
 - d) Describe pacemaker.
 - e) Define collision. Explain in detail types of collision.
 - f) Write a short note on CT Scan.
- Q.6** Long answer questions (**ANY ONE**): [11]
- a) Explain with neat diagram vocalization and hearing of sound. Write characteristics of musical sound.
 - b) State the law of gravitation. Explain how the acceleration due to gravity vary with attitude and latitude.