POST BASIC BACHELOR OF SCIENCE (NURSING)
F. Y. P. B. B. Sc. (Nursing) : SUMMER : 2024
SUBJECT: BIOCHEMISTRY & BIOPHYSICS

Day : Wednesday
Date : 10/07/2024

S-5658-2024

Time : 10:00 AM-01:00 PM
Max. Marks : 75

N.B.

1) All questions are **COMPULSORY.**
2) Figures to the right indicate **FULL** marks.
3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION – I

Q.1 Write short answers on any **FIVE** of the following: **(5X2=10)**

a) What is mitochondria? Give its function.
b) Name the sugar found in fruit and milk.
c) What is hyperuricemia? Give any two conditions of it.
d) Name the different transport system.
e) Enlist different hormones with function.
f) Give any two conditions of high urea level?
g) Which enzymes are used to diagnosis of myocardial infarction?

Q.2 Write short notes on any **FOUR** of the following: **(4X4=16)**

a) Describe water balance of the body.
b) Blood buffers
c) Atherosclerosis
d) Factors affecting enzymatic activity.
e) Structure and function of DNA.
f) Immunoglobulins

Q.3 Attempt any **ONE** of the following: **(12)**

a) Define and classify lipids with suitable examples. Add a note on functions of lipid.

OR

b) What is the normal range of blood sugar in fasting, post prandial and random condition? How blood sugar is maintenance and add a note on diabetes mellitus?

SECTION – II

Q.4 Write short answers on any **FIVE** of the following: **(5X2=10)**

a) Explain fundamental units and derived units.
b) Explain Newtons second law of motion.
c) Write applications of gravity in nursing.
d) What is friction? How to reduce friction?
e) Explain heat transfer.
f) Explain use of heat for sterilization.
g) State law of reflection and refraction.

Q.5 Write short notes on any **FOUR** of the following: **(4X4=16)**

a) Describe cardiac fibrillator.
b) What is centre of gravity, state different types of equilibrium?
c) What is isotopes, to isotones and isomer and give its examples.
d) Explain use of radioisotopes in medicine.
e) State Boyle's and Charles law, deduce ideal gas equation.
f) Explain the physiological effect of heat.

Q.6 Attempt any **ONE** of the following: **(1x11=11)**

a) State biological effects of light. Explain give application of laser in medicine.

OR

b) Describe in details the CT scan and the MRI with its principle.

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