F. Y. P. B. B. SC. (NURSING) : SUMMER - 2019
SUBJECT : BIOCHEMISTRY AND BIOPHYSICS

Day : Monday
Date : 22/04/2019

S-2019-4360

Time : 10.00 A.M. TO 01.00 P.M.
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 books.

SECTION – I

Q. 1 Write short notes on **ANY FIVE** of the following: **(10)**

a) What is lysosome? Give its functions.

b) Enlist the factors affecting enzymes activity.

c) Give the diagnostic importance of serum alkaline phosphatase.

d) Enlist the hormones of pituitary gland.

e) What is hypothyroidism? Give its types.

f) What is normal range of blood sugar in random, fasting & postprandial state?

g) Name the ketone bodies.

Q. 2 Short answer questions **ANY FOUR** of the following: **(16)**

a) What is lipoprotein? Describe its types.

b) Describe digestion & absorption of carbohydrate.

c) Describe regulation of water & electrolyte balance.

d) Describe Krebs cycle

e) Enlist the thyroid hormones. Give its functions.

f) Enlist plasma proteins. Give its functions.

Q. 3 Long answer questions **ANY ONE** of the following: **(12)**

a) What is beta oxidation? Describe the process of beta oxidation. Mention number of ATPs formed by oxidation of palmitic acid by beta oxidation.

b) Describe & classify enzymes with suitable examples. Describe the diagnostic application of enzymes.

P. T. O.

SECTION – II

Q. 4 Write short notes on **ANY FIVE** of the following: **(10)**

a) What is Doppler effect?

b) Difference between mass number & atomic number.

c) Give the uses of semiconductor diode. Explain one of them in detail.

d) What is specific gravity? Gives the density of blood & bone

e) State the law of conservation of momentum.

f) State the biological effect of light.

g) Explain the physiological effect of heat.

Q. 5 Short Answer Questions **ANY FOUR** of the following: **(16)**

a) Define the unit of length, mass & time with examples.

b) What is equilibrium & explain the various types of equilibrium.

c) Explain construction working & uses of mercury thermometer.

d) What is myopia? How it can be corrected.

e) Describe sphygmomanometer.

f) Explain the uses of radioisotopes in medicine.

Q. 6 Long Answer Questions **ANY ONE** of the following: **(11)**

a) What is self induction & mutual induction? Describe the CT scan with principle.

b) State the law of conservation of energy. Derive an expression for kinetic & potential energy. Write advantages & disadvantages of friction

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