

**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

\* \* \* \* \*