

Reg. No:.....

**First Year Post Basic B.Sc Nursing Supplementary Examinations
April 2018**

**Biochemistry & Biophysics
(2016 Scheme)**

Time: 3 Hours

Total Marks: 75

QP Code: 113011

Section A – Biochemistry

Marks: 40

- Answer all questions. Draw diagram wherever necessary
- Write *section A* and *section B* in *separate answer books (32 pages)*. Do not mix up questions from *section A* and *section B*.

Short Essays: (2x7 = 14)

1. What is glycolysis. Describe the steps of glycolysis and add a note on the energetics. (1+4+2)
2. How are fatty acids activated and transported across the mitochondrial membrane. Enumerate the steps of beta oxidation of palmitic acid. (4+3)

Short Notes: (2x5 = 10)

3. How is uric acid formed. Add a note on gout.
4. Discuss the important products formed from cholesterol

Answer briefly: (4x4 = 16)

5. What are the functions of phospholipids
6. Hormones involved in glucose homeostasis
7. Diagnostic uses of enzymes.
8. Functions of plasma proteins

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Section B- Biophysics

Marks: 35

Short Essays: (3x7 = 21)

1. What do you mean by accommodation in an eye and how various muscles are involved in this process. (3+4)
2. Explain what you mean by ionization by radiation. List the instruments that are used for the detection of ionization by radiation. (4+3)
3. What do you mean by clinical thermometer and what are the advantages of using mercury in it. (3+4)

Short Notes: (2x4 = 8)

4. Line and center of gravity of the human body.
5. How ultrasound is used in physiotherapy.

Answer Briefly: (2x3 = 6)

6. State Newton's second law of motion.
7. What is electrolysis
