

**First Year Post Basic B.Sc Nursing Degree Examinations October 2017**

**Biochemistry & Biophysics**

**(2016 Scheme)**

**Time: 3 Hours**

**Total Marks:**

**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. Describe citric acid cycle (TCA cycle). Add a note on the energetics of the cycle. (5+2)
2. Describe in detail on regulation of water and electrolyte balance. Add a note on causes for imbalance of water and electrolyte balance. (4+3)

**Short Notes:**

**(2x5 = 10)**

3. What instructions are given to a patient who would undergo glucose tolerance test (GTT). Write briefly on procedure for GTT
4. What are the different types of lipoproteins. Add a note on their functions and clinical significance

**Answer briefly:**

**(4x4 = 16)**

5. What are the functions of proteins
6. How ketone bodies are formed in the body.
7. Essential fatty acids
8. How proteins are digested and absorbed in the body

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**Section B- Biophysics**

**Marks: 35**

**Short Essays:**

**(3x7 = 21)**

1. Explain the phenomenon of radioactivity. List various applications of radioactive isotopes in medicine. (3+4)
2. What do you mean by friction. Explain how the force of friction can cause a burn. (3+4)
3. What are different kinds of pressures we experience in human body. Explain how to measure any two of these pressures. (3+4)

**Short Notes:**

**(2x4 = 8)**

4. Explain in brief the applications of light therapy in medical field.
5. Define density, relative density and specific gravity, describe their applications in nursing.

**Answer Briefly:**

**(2x3 = 6)**

6. What is meant by reflection and refraction
7. What are the SI units of work, power and energy

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