

Reg. No:.....

**First Year Post Basic B.Sc Nursing Degree Supplementary Examinations  
April 2025**

**Biochemistry & Biophysics  
(2016 Scheme)**

**Time: 3 Hours**

**Total Marks: 75**

- *Answer all questions to the point neatly and legibly • Do not leave any blank pages between answers • Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together • Leave sufficient space between answers*
- *Draw diagrams 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.*

**QP Code: 113011**

**Section A – Biochemistry**

**Marks: 40**

**Short Essays:**

**(2x7=14)**

1. Describe the steps in Urea cycle and its regulation
2. Describe the mechanism of enzyme action. Add a note on diagnostic applications of enzymes

**Short Notes:**

**(2x5=10)**

3. Give the composition of cell. Add a note on subcellular organelles with diagram
4. Biological importance of important lipids and their functions.

**Answer briefly:**

**(4x4=16)**

5. Discuss water balance
6. Role of nucleic acid in protein synthesis
7. Intestinal absorption of glucose
8. Causes of hyperglycemia and hypoglycemia

**QP Code: 114011**

**Section B- Biophysics**

**Marks: 35**

**Short Essays:**

**(3x7=21)**

1. Explain the process of osmosis and discuss the importance of using saline in physiological solutions. Why is the blood pressure in humans is greater at the feet than at the brain.
2. Describe MRI and its usage.
3. Explain in detail about the applications of gravity in nursing with suitable examples.

**Short Notes:**

**(2x4=8)**

4. Explain in detail about the Electrocardiography (ECG).
5. Explain in detail about hearing loss and hearing aids.

**Answer Briefly:**

**(2x3=6)**

6. What are isotopes and isobars. Give examples.
7. Define force, work and energy. Write their SI units.

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