

Reg. No:.....

**First Year Post Basic B.Sc Nursing Degree Supplementary Examinations  
July 2022**

**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. Give a detailed explanation about the Biosynthesis of proteins.
2. Explain Glucose Tolerance Test.

**Short Notes:**

**(2x5=10)**

3. What are ketone bodies. Explain the formation and utilization of ketone bodies.
4. Differentiate hyper and hypoglycemia and their effects.

**Answer briefly:**

**(4x4=16)**

5. Draw the structure and explain the functions of Mitochondria.
6. Write the normal level and sources of cholesterol and give a note on hypercholesterolemia.
7. Give a note on water and electrolyte balance.
8. Explain the formation of uric acid and write two causes of hyperuricemia.

**QP Code: 114011**

**Section B- Biophysics**

**Marks: 35**

**Short Essays:**

**(3x7 = 21)**

1. Discuss the importance of center of gravity on human body. A body is weightless at the center of earth. Why.
2. Explain the process of osmosis and discuss the importance of using saline physiological solutions. Why is the blood pressure in humans is greater at the feet than at the brain.
3. Describe MRI and its usage.

**Short Notes:**

**(2x4 = 8)**

4. Radioisotopes and its applications in medicine.
5. Cardiac defibrillation.

**Answer Briefly:**

**(2x3 = 6)**

6. What are the different uses of ultrasonic waves.
7. What is myopia. How it can be corrected.

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