

**First Year Post Basic B.Sc Nursing Supplementary Examinations
April 2019**

Biochemistry and Biophysics

(2010 Scheme)

Time: 3 Hours

Total Marks: 75

- Answer all questions. 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: 103011

Section A - Biochemistry

Marks: 37½

Essay:

(10)

1. Define glycolysis. Explain the steps of glycolysis. Add a note on its energetics.

Short notes:

(4x5=20)

2. Outline the formation of uric acid in the body. Add a note on causes of gout.
3. Outline the biosynthesis of proteins in the body
4. Explain the digestion of lipids
5. Procedure of oral glucose tolerance test and its importance

Answer briefly:

(3x2½=7½)

6. What are essential amino acids. Name any four essential amino acids.
7. Define gluconeogenesis. Name the key enzymes of gluconeogenesis
8. Mention the importance of liver in fat metabolism

QP CODE: 104011

Section B - Biophysics

Marks: 37½

Essay:

(10)

1. Describe the atomic structure. Define isotopes and isobars and give examples

Short notes:

(4x5=20)

2. Principle and uses of electrocardiography (ECG)
3. Principle and uses of Magnetic Resonance Imaging (MRI)
4. Define SI units. Mention the SI units of length, weight, mass and time
5. Principle of lever and body mechanics and its application in nursing

Answer briefly:

(3x2½=7½)

6. Difference between scalar and vector quantity
7. Use of heat for sterilization
8. Name the instruments used for detection of ionizing radiation