

Reg. No:.....

**First Year Post Basic B.Sc Nursing Supplementary Examinations
April 2018
(2010 Scheme)**

BIOCHEMISTRY AND BIOPHYSICS

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. Discuss the diagnostic significance of • liver enzymes • pancreatic enzymes
• Cardiac enzymes (5+2.5+2.5)

Short notes: (4x5=20)

2. Name the plasma proteins. Discuss their functions (1+4)
3. Name the proteolytic enzymes. Discuss how amino acids are absorbed (2+3)
4. Define gluconeogenesis. Mention the sources of gluconeogenesis. Write the coris cycle. (1+2+2)
5. State the reference range for cholesterol. Explain how cholesterol is transported. Name the conditions where cholesterol level is increased. (1+2+2)

Answer briefly: (3x2½ =7½)

6. State the reference range for • Sodium • Urea • Bicarbonate
7. Draw a neat labelled diagram of DNA
8. Name the inhibitors of electron transport chain

QP CODE: 104011 Section B- BIOPHYSICS

Marks: 37½

Essay: (10)

1. Define isotopes, isobars and isomers. What is meant by radioisotopes. Give the biomedical applications of radioisotopes.

Short notes: (4x5=20)

2. What is meant by lever system. Explain the types of lever system.
3. Define arterial blood pressure. Give its normal value. Add a note on hypotension.
4. Explain the modes of transfer of heat.
5. Draw a neat labelled diagram of ECG. Give its clinical significance.

Answer briefly: (3x2½=7½)

6. Define velocity and acceleration. Give their units.
7. Give the relationship between wavelength, frequency and energy.
8. Convert the temperature 40 degree Celsius to Fahrenheit scale.
