

Reg. No:.....

**First Year Post Basic B.Sc Nursing Supplementary Examinations
October 2018**

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. Explain the reactions of tricarboxylic acid cycle. Add a note on its significance and energetics.

(6+2+2)

Short notes:

(4x5=20)

2. Name the lipoproteins. Mention their functions **(2+3)**
3. Define genetic code. Mention its features **(1+4)**
4. State the reference range for total protein and albumin. Mention causes for decreased albumin. **(2+3)**
5. Draw a neat labelled diagram of cell.

Answer briefly:

(3x2½ =7½)

6. Define K_m . Mention its significance
7. Mention the causes of increased blood urea level
8. Name the components of electron transport chain

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Section B - Biophysics

Marks: 37½

Essay:

(10)

1. Define voltage, current and resistance. Explain Ohm's law. Add a note on artificial pacemaker.

Short notes:

(4x5=20)

2. Explain the biomedical applications of radioisotopes.
3. Define noise. Explain the effects of noise pollution on human health.
4. Explain the applications of light in therapy.
5. Explain the modes of transfer of heat.

Answer briefly:

(3x2½=7½)

6. Define density and specific gravity.
7. Give the relationship between wavelength, frequency and energy.
8. Give the advantages and disadvantages of MRI scan.
