

Reg. No:.....

**First Year Post Basic B.Sc Nursing Regular/Supplementary  
Examinations October 2019**

**Biochemistry & Biophysics  
(2016 Scheme)**

**Time: 3 Hours**

**Total Marks: 75**

- Answer all questions.
- Draw diagram 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. Define gluconeogenesis. List the precursors for gluconeogenesis. Mention the steps for gluconeogenesis with lactate as precursor. (1+2+4)
2. What are ketone bodies. Give examples. How are they synthesized and utilized. (3+4)

**Short Notes**

**(2x5=10)**

3. Discuss the factors affecting enzyme activity
4. How is ammonia formed in the body. What are the causes of hyperammonemia

**Answer briefly:**

**(4x4=16)**

5. What precautions have to be taken to handle specimens for enzyme estimation
6. The dietary sources, recommended daily allowance and biochemical functions of potassium
7. Essential amino acids
8. How carbohydrates are digested and absorbed in the body

**QP Code: 114011**

**Section B- Biophysics**

**Marks: 35**

**Short Essays:**

**(3x7=21)**

1. What is traction force. What are the applications of traction forces in medical field. (2+5)
2. State the laws of electromagnetic induction. Explain the use of electricity in human body. (2+5)
3. What do you mean by refraction. Describe the refraction taking place in human eye. (2+5)

**Short Notes:**

**(2x4=8)**

4. MRI and its application in human health.
5. Sterilization and the use of heat in sterilization.

**Answer Briefly:**

**(2x3=6)**

6. What is systolic and diastolic blood pressure
7. Define vectors and scalars with suitable examples.

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