

Reg. No:.....

**First Year Post Basic B.Sc Nursing Degree Supplementary Examinations
April (November), 2020**

**Biochemistry & Biophysics
(2016 Scheme)**

Time: 3 Hours

Total Marks: 75

QP Code: 113011

Section A – Biochemistry

Marks: 40

- 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.

Short Essays: (2x7=14)

1. State the reference range for fasting and postprandial plasma glucose level. Discuss the causes and manifestations of hyperglycemia and hypoglycemia. (1+3+3)
2. Discuss the diagnostic utility of enzymes in liver diseases (4+3)

Short Notes: (2x5=10)

3. Enumerate the functions of plasma proteins
4. Gout

Answer briefly: (4x4=16)

5. Name the components of electron transport chain. Mention their inhibitors
6. Discuss the role of pancreatic lipase and bile salts in lipid digestion and absorption
7. Mention the functions of the following
 - high density lipoprotein • lysosomes • aldosterone • sodium
8. Give two examples for each of the followings
 - ketone bodies • essential amino acids • proteolytic enzymes
 - polyunsaturated fatty acids

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Section B- Biophysics

Marks: 35

Short Essays: (3x7 = 21)

1. Explain Newton's three laws of motion with example. Define the term displacement and acceleration with example. (5+2)
2. State laws of reflection. Explain the need of refraction in vision applications. (2+5)
3. State and explain Pascal's law. How this law finds its applications in the measurements of blood pressure. (2+5)

Short Notes: (2x4 = 8)

4. What are the advantages and disadvantages of friction
5. What are density and specific gravity

Answer Briefly: (2x3 = 6)

6. What are unique properties of laser lights.
7. Distinguish between potential energy and kinetic energy.
