

KALOJI NARAYANA RAO UNIVERSITY OF HEALTH SCIENCES
WARANGAL, TELANGANA STATE – 506 002
POST BASIC B.Sc. (NURSING) YEAR-I DEGREE EXAMINATIONS: NOVEMBER, 2025
BIOCHEMISTRY AND BIOPHYSICS

Time: 3 Hours

Max Marks: 75

Note: Answer part **A** and **B** questions in two separate answer books
Question in part “**A**” should not be answered in part “**B**” and vice versa. Otherwise they will not be valued

PART-A
(BIOCHEMISTRY) 38 Marks

Write an essay on any ONE of the following: **1 X 13 = 13**

1. Write about absorption and catabolism of Carbohydrates.
2. Explain about the biosynthesis of fatty acids. Discuss the role of liver in fat metabolism.

Write a short note on any THREE of the following: **3 X 5 = 15**

3. Write about essential amino acids.
4. Types and function of Lipoproteins.
5. Glycemia and Glucose tolerance test.
6. Diagnostic applications of enzymes.
7. Sources and functions of electrolytes

Write briefly on the following: **5 X 2 = 10**

8. Fluid Balance.
9. General structure of Amino acids.
10. Urea cycle.
11. What are the four steps in Glycogenesis?
12. Nitrogenous constituents of urine.

PART-B
(BIOPHYSICS) 37 Marks

Write an essay on any ONE of the following: **1 X 12 = 12**

13. What is Radio activity? Explain the medical applications of radioactive isotopes.
14. What are the principles of Electronics? Explain the common electronic equipment used in patient care.

Write a short note on any THREE of the following: **3 X 5 = 15**

15. EEG.
16. Use of heat for sterilization.
17. Laws of Reflection.
18. Types of Osmotic pressure.
19. What is the basic law of magnetism?

Write briefly on the following: **5 X 2 = 10**

20. Structure of Atom.
21. Expand the MRI, ECG and ECT.
22. What are the units of Energy?
23. What is the formula for Specific gravity?
24. Write any three uses of X-rays in medicine.