

**KALOJI NARAYANA RAO UNIVERSITY OF HEALTH SCIENCES
WARANGAL, TELANGANA– 506 002**

POST BASIC B.Sc. (NURSING) FIRST YEAR DEGREE SUPPLEMENTARY EXAMINATIONS: MAY, 2025

BIOCHEMISTRY AND BIOPHYSICS

Time: 3 Hours

Max Marks: 75

Note: Answer part **A & 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. Explain in detail about digestion and absorption of carbohydrates?
2. Write in detail on glycogen metabolism.

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

3. What are Isoenzymes? Give two examples with their clinical importance.
4. Ketone bodies.
5. Biomedical waste management.
6. Describe the regulation of electrolyte balance.
7. Oxidative phosphorylation.

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

8. ADH.
9. Coenzyme.
10. Give normal serum levels a) Cholesterol b) Uric acid
11. Disaccharides.
12. Hyperglycemia.

Part-B

BIOPHYSICS (37 Marks)

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

13. Define current, voltage, and resistance. Mention their units and write a note on Ohm's law.
14. Explain EEG and CAT scan in detail.

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

15. Effect of gravitational forces on human body.
16. Noise pollution and its prevention.
17. Isotopes and Isobars.
18. Regulation of body temperature.
19. Vector and scalar motion.

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

20. Define Hydrostatic pressure.
21. What is Displacement? Give its units.
22. Define Semiconductor.
23. What is Laser?
24. Enumerate four principles of body mechanics.