

QP Code: 212020

Reg. No.....

**Second Year B.Sc Medical Biochemistry Degree Regular/Supplementary
Examinations January 2024**

Paper VII – Analytical Methods and Instrumentation

(2016 Scheme)

Time: 3 hours

Max: Marks: 100

- *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 table/diagrams/flow charts wherever necessary*

Long Essays: (2x15=30)

1. Explain in detail the principle, instrumentation, types and applications of High Performance Liquid Chromatography
2. What are the different types of radiations. Briefly explain the detection and measurement of radioactivity.

Short Essays: (2x10=20)

3. What is Cell fractionation. Explain the cell fractionation procedure and its applications.
4. Write the principle and the procedure of radioimmunoassay

Short Answers (6x5=30)

5. Applications of ELISA
6. State Beer-Lambert's law. What are its limitations
7. Ion exchange chromatography – Principle and its applications
8. Compare between nephelometry and turbidimetry
9. Glass membrane electrode
10. Design and types of rotors used in centrifugation

Comment on (10x2=20)

11. Tracking dyes
12. Electromagnetic spectrum
13. Applications of fluorimetry
14. Types of supporting media in electrophoresis
15. Flame ionization detector
16. Retention time
17. Labelled probes in radioimmunoassay
18. Principle of immunoelectrophoresis
19. List any two ideal characteristics of a detector
20. Stationary and mobile phases in size exclusion chromatography
