

QP Code: 212020

Reg. No.....

**Second Year B.Sc Medical Biochemistry Degree Supplementary
Examinations August 2025**

**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. Detail the principle, technique and application of Gas liquid chromatography.
2. Explain the principle, technique and applications of Paper electrophoresis.

Short Essays: (2x10=20)

3. Explain the principle, technique and applications of molecular exclusion chromatography.
4. Describe atomic absorption spectrophotometer and write down the application.

Short Answers (6x5=30)

5. Differentiate density gradient and differential centrifugation.
6. Write a note on Paper Chromatography.
7. Explain cell fractionation using centrifuge.
8. Discuss about pH meter.
9. Write a note on non-ionizing and ionizing radiations.
10. Write down the principle and applications of gel electrophoresis.

Comment on (10x2=20)

11. TEMED
12. Electromagnetic spectrum.
13. Reverse phase HPLC.
14. Rotors in centrifuges.
15. Role of tracking dye in electrophoresis. Give example.
16. Nephelometry.
17. Rules for handling RA isotopes in Laboratory.
18. Use of centrifugation technique for determining molecular weight.
19. Monochromatic and polychromatic light.
20. Absorption and transmission of light.
