

**Second Year B.Sc Medical Microbiology Degree Regular/Supplementary  
Examinations March 2025**

**Paper VIII – Methodology and Instrumentation**

**(2016 Scheme)**

Time: 3 hrs

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 Diagrams wherever necessary*

**Long Essays**

(2x15=30)

1. Discuss in detail Beer- Lamberts law, components and performance parameters of spectrophotometer.
2. What is the theory behind electrophoresis. Describe in detail about clinical electrophoresis and pulse field electrophoresis.

**Short Essays**

(2x10=20)

3. Gas chromatography
4. Immunochemical techniques

**Short Answers**

(6x5=30)

5. Western blotting
6. RIA
7. Advantages of ELISA
8. Dark field microscope
9. Gas Pak
10. Principle of centrifugation

**Comment on**

(10x2=20)

11. Freeze etching technique
12. Resolution
13. Nephelometry
14. Isoelectric focusing
15. Cold room
16. RCF
17. Competitive ELISA
18. Electromagnetic spectrum
19. Hot air oven
20. Steam sterilization

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