

QP Code: 213019

Reg. No.....

**Second Year B.Sc Medical Microbiology Degree
Regular/Supplementary Examinations October 2019**

Paper VIII – Methodology and Instrumentation

(2016 Scheme)

Time: 3 hrs

Max Marks: 100

- **Answer all Questions**
- **Draw diagrams wherever necessary**

Long Essays

(2x15=30)

1. Explain the principle of electrophoresis. Explain the factors affecting electrophoretic mobility. Add a note on polyacrylamide gel electrophoresis (PAGE).
2. Define the principle of centrifuge. Describe instrumentation, working and principle of ultra-centrifuge.

Short Essays

(2x10=20)

3. Describe the mechanism and procedure involved in separation of biomolecules by ion- exchange chromatography.
4. Explain radio immunoassay - principle, different methods, labelled probes and applications

Short Answers

(6x5=30)

5. Anaerobic cultivation apparatus
6. Principle and application of spectrophotometry.
7. Biological safety cabinet
8. Nephelometry
9. Paper chromatography - principle and applications
10. Phase contrast microscope

Comment on

(10x2=20)

11. Reverse phase chromatography
12. Solubilisers
13. Partition coefficient.
14. Isoelectric focussing
15. BOD (Bio-oxygen demand) incubator
16. Gel filtration chromatography
17. Beer-Lambert's law
18. pH measurements – technique and applications
19. Isopycnic centrifugation
20. Magnification of microscope
