

QP Code: 202020

Reg. No.....

**Second Year B.Sc. Medical Biochemistry Supplementary Examinations
April 2018**

ANALYTICAL METHODS AND INSTRUMENTATION

Time: 3 Hours

Total Marks: 80

- **Answer all the questions**
- **Draw diagrams wherever necessary**

Essay

(2x15=30)

1. Describe the properties of light and electromagnetic spectrum and write the principles and applications of absorption spectrophotometry.
2. Define the principles of partition and adsorption chromatography with examples. Describe the methods and applications of thin layer chromatography.

Short Essay

(2x10=20)

3. Describe the use of two density gradient materials with one application for each.
4. Describe the different types of gels, tracking dyes, solubilizers and staining dyes used for electrophoresis.

Short Notes

(4x5=20)

5. Two common enzymes for enzyme linked immunosorbant assay and reactions they catalyse.
6. Nephelometry
7. Principle and the method of immunoelectrophoresis
8. Principle of scintillation counting and examples of isotopes used.

Answer Briefly

(5x2=10)

9. Principle of selection of a filter for absorbance of light
10. Applications of affinity chromatography.
11. Principle of GM counter
12. An application of agarose gel electrophoresis
13. Two experimental application of visible range of light
