D.K.M.COLLEGE FOR WOMEN (AUTONOMOUS), VELLORE-1.

I M.Sc Biochemistry

Semester : I

Tile of the paper: ANALYTICAL BIOCHEMISTRY

Subject Code : 15CPBC1A

SECTION –A 6 MARKS

1. Write a note on organ & tissue slice technique.
2. Explain cell disruption and homogenization techniques.
3. Write a note on cell sorting.
4. Give an account on cell counting.
5. Explain osmosis and its applications.
6. Derive Henderson – Hasselbalch equation.
7. Explain PH measurement using glass electrode.
8. Write a note on cryopreservation.
9. Explain Manometric techniques.
10. Explain differential centrifugation.
11. Write a note on density gradient centrifugation.
12. What are radio isotopes? Explain its applications.
13. What are all the factors which affect electrophoresis?
14. Explain paper electrophoresis.
15. Explain the principle of Iso electric focusing.
16. Give an account on southern blotting.
17. Give an account on Northern blotting.
18. Explain western blotting and its applications.
19. Explain column chromatography.
20. Explain Thin layer chromatography.
21. Explain the principle of Ion exchange chromatography.

22. Give a note on optical rotatory dispersion and circular Dichroism.
23. Write a short note on Turbidimetry.
24. Explain Nephlometry.
25. Write a note on NMR spectroscopy.

SECTION-B 15 MARKS

1. Explain in detail about the cell distruption and homogenization techniques.
2. Explain about the measurement of pH using Glass electrode.
3. Describe Oxygen electrode.
4. Discuss in detail about cryopreservation.
5. Explain preparative centrifugation.
6. Explain in detail about differential and density gradient centrifugation.
7. Discuss about the measurement of radio activity and its applications.
8. Explain the principle and factors affecting electrophoresis.
9. Explain High voltage electrophoresis.
10. Explain in detail about SDS PAGE.
11. Discuss DNA sequencing methods.
12. Write in detail about the blotting techniques.
13. Explain the principle and application of Iso electric focusing.
14. Explain the principle and applications of Ion exchange chromatography.
15. Explain about affinity chromatography.
16. Discuss about Gas Liquid chromatography.
17. Describe High performance Liquid chromatography and its applications.
18. Elaborate Gel permeation chromatography and its applications.
19. Explain in detail about U-V visible spectroscopy and its biological applications.
20. Explain Mass spectroscopy.
21. Discuss in detail about GC – MS

22. Explain electron spin Resonance Spectroscopy and its applications.
23. Explain in detail about Nuclear magnetic Resonance Spectroscopy.