 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

**M.Sc.** DEGREE EXAMINATION - **MEDICAL LAB. TECHNOLOGY**

FOURTH SEMESTER – APRIL 2012

# ML 4810 - SEPARATION TECHNIQUES & PHARMACEUTICAL CHEMISTRY

Date : 18-04-2012 Dept. No. Max. : 100 Marks

Time : 1:00 - 4:00

**PART-A**

Answer **ALL** the questions: **(10 X 2=20 Marks)**

1. What is sedimentation co-efficient?

2. Define isoelectric focusing.

3. Name the various locating agents used in TLC.

4. What are gradient and isocratic elution?

5. Write down the importance of protease and RNase in DNA isolation.

6. List the enteral routes of drug administration.

7. Mention the membranes used in blotting techniques.

8. Distinguish teratogens from mutagens.

9. Define electrophoretic mobility.

10. What is probe hybridization?

**PART-B**

Answer any **FOUR (4 X 10 =40 Marks**)

11. Classify and write the basic principle of centrifugation and add a note on rotors.

12. What is meant by blotting? Explain southern blotting technique.

13. Write notes on affinity chromatography with suitable diagram.

14. Describe the steps involved in isolation and separation of RNA.

15. Elaborate the mechanism of drug absorption and distribution.

16. What are acute and chronic toxicities? Write notes on heavy metal toxicity.

**PART-C**

Answer any **TWO (2 X 20=40 Marks)**

17. Explain the mechanism and application of preparative centrifugation.

18. What is zwitterion? Describe SDS-PAGE electrophoresis.

19. Elaborate the principle, procedure and diagnostic importance of PCR techniques.

20. Discuss general toxicology and toxicokinetics.

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