 LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

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

FOURTH SEMESTER – APRIL 2011

# ML 4810 - SEPARATION TECHNIQUES & PHARMACEUTICAL CHEMISTRY

 Date : 07-04-2011 Dept. No. Max. : 100 Marks

 Time : 9:00 - 12:00

SECTION-A

ANSWER **ALL** THE QUESTIONS: **(10 X 2=20 Marks)**

1. What is Svedberg unit?

2. Differentiate rate-zonal from isopycnic centrifugation.

3. What are isocratic and gradient elution?

1. List any four locating agents used in TLC.
2. Mention any two membranes used in blotting technique.
3. What is isoelectric focussing?
4. Name any four infectious agents which act as teratogens.
5. What is Real Time PCR?
6. Define the term bioenhancer.
7. What is lethal and sublethal toxic effects?

**SECTION-B**

ANSWER ANY **FOUR** QUESTIONS **(4 X 10=40 Marks)**

 11. Explain the rate zonal and isopycnic centrifugation technique.

12. Write notes on molecular exclusion chromatography.

1. Write the principle, procedure and applications of western blotting technique.
2. Give an account of the mechanism of affinity chromatograpy.
3. Discuss the different routs of excretion of drug.
4. Elaborate the impacts of heavy metal toxicity with suitable example.

**SECTION-C**

ANSWER ANY **TWO** QUESTIONS **(2 X 20=40 Marks)**

17. Explain the mechanism, procedure and applications of preparative centrifugation.

18. Describe the principle, operation and applications of SDS-PAGE.

19. Trace the polymerization chain reaction with suitable diagram.

 20. Discuss the biotransformation of drugs.

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