

LOYOLA COLLEGE (AUTONOMOUS), CHENNAI – 600 034

M.Sc. DEGREE EXAMINATION – MEDICAL LAB. TECHNOLOGY

FOURTH SEMESTER – APRIL 2010

ML 4810 - SEPARATION TECHNIQUES & PHARMACEUTICAL CHEMISTRY

Date & Time: 17/04/2010 / 9:00 - 12:00 Dept. No.

Max. : 100 Marks

Answer **ALL** questions

PART-A

(10 × 2 = 20 Marks)

1. Name the ligands used in affinity chromatography.
2. List the factors affecting drug distribution.
3. What is R max and K-factor?
4. Differentiate simple from facilitated diffusion.
5. Write the composition of polyacrylamide gel.
6. What is electroendosmosis?
7. Write the basic principle behind centrifugation.
8. What is biological half-life?
9. Give two examples each of anion and cation exchangers.
10. What is retention time?

Answer any **FOUR** questions

PART – B

(4 × 10 = 40 Marks)

11. Describe the density gradient centrifugation and its applications.
12. What is svedberg unit? Explain rate zonal centrifugation.
13. Write the principle, procedure and applications of western blotting technique.
14. Discuss the systemic toxic effects with suitable example.
15. Explain the mechanism of ion-exchange chromatography.
16. Elaborate the parenteral and enteral routes of drug administration.

Answer any **TWO** questions

PART – C

(2 × 20 = 40 Marks)

17. What are different types of centrifugation? Write the mechanism, procedure and applications of analytical ultracentrifuge.
18. Describe in detail the principle, operation and applications of GLC.
19. Explain in detail the SDS-polyacrylamide gel electrophoresis.
20. Elaborate the types of biotransformation of drugs with suitable examples.
