

**COURSE CODE – 2030702**  
**PG DEGREE EXAMINATION – JAN 2009**  
**M.SC (BIO-CHEM)**  
**BIO-INSTRUMENTATION**

**(For Candidates Admitted from Calendar 2007 Onwards)**

**Time: 3 Hours**

**Max Marks: 75**

**Section – A**

**Answer All the Questions:**

**15X1=15**

1. What are the community used adsorbents for TLC
2. What is electrochemical potentials
3. Define electro endosmosis
4. Which electrophoretic media show molecular sieving effect
5. What is desalting?
6. Define Svedberg unit
7. What is Zeta potential?
8. What are the different units used to express the radio activity
9. Expand TEMED
10. Mention the use of sodium dodecyl sulphate (SDS)
11. What is Tracer Technique?
12. Name the isotopes used for kidney scanning?
13. What is Brachy therapy
14. Define wavelength
15. Which effect on radiation does autoradiography depend on?

**Section – B**

**Answer any Five Questions:**

**5X6=30**

16. a. Write short note on paper chromatography

**(OR)**

- b. Write briefly on Ion-exchange chromatography.

17. a. Write the principle & technique of isoelectric focusing

**(OR)**

- b. Write the technique and instrumentation of mass spectrometry

18. a. Write the applications of differential centrifugation

**(OR)**

- b. Write the principle and methodology of density gradient centrifuge.

19. a. Write the short note on defectors

**(OR)**

- b. Write short note on Autoradiography

20. a. Write short note on Gerger muller counter

**(OR)**

- b. Write briefly on scintillation counter.

**Section – C**

**Answer any Two Questions:**

**2X15=30**

21. Write principle, operation and application of HPLC
22. Write an essay on determination of molecular weight of a protein by SDS- PAGE
23. Explain the principle, Instrumentation and applications of UV spectrophotometer
24. Write an essay on principle, methodology and applications of ultra centrifuge.
25. Write an essay on applications of radio isotopes in medicine.