



E/IV/CBGS/BT/AMB  
Q.P. Code : 568501

Analytical Methods in Biotechnology (3 Hours) **25** [ Total Marks : 80

- N.B. :** (1) Question No. 1 is compulsory.  
 (2) Attempt any 3 questions out of remaining 5 questions  
 (3) Each question is of 20 marks.  
 (4) Figures to right indicates full marks

1. (a) Discuss two dimensional electrophoresis. 5  
 (b) Write a note on uses of radioisotopes in life sciences. 5  
 (c) Write a note on size exclusion chromatography. 5  
 (d) Discuss application of UV and visible spectrophotometry. 5
2. (a) Explain factors affecting electrophoresis. 10  
 (b) Explain SDS-PAGE technique? 10
3. (a) Explain HPLC. 10  
 (b) Describe in detail paper chromatography. 10
4. (a) Write in brief rate zonal centrifugation. 10  
 (b) Explain different types of centrifuges. 10
5. (a) Describe principle and instrumentation of UV-visible spectrophotometry. 10  
 (b) Explain detection and measurement of radioactivity using ionization chamber. 10
6. (a) Discuss Geiger-Muller method. 10  
 (b) Discuss in detail Lamberts Beers law. 10