

S.No. 1993

12UMBS02

(For the candidates admitted from 2012-2013 onwards)

B.Sc. DEGREE EXAMINATION, NOVEMBER 2017.

Third Semester

Microbiology

SBEC – PRINCIPLES OF BIOINSTRUMENTATION

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Ultracentrifuge.
2. Swedberg constant.
3. Chromatogram.
4. Partition co-efficient.
5. Agarose gel electrophoresis.
6. Colony blotting.
7. Colorimetry.



8. Spectrophotometer.
9. Radio active decay.
10. GM counter.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) What is differential centrifugation? Explain.  
Or  
(b) Give an account on density gradient centrifugation.
12. (a) Enlist the uses of Ion-exchange chromatography.  
Or  
(b) Write a short note on Gel filtration.
13. (a) What is southern blotting? Summarise the steps in it.  
Or  
(b) Add a note on Dot blotting.
14. (a) Enumerate the applications of spectrophotometer.  
Or  
(b) Describe fluorescence spectrophotometer.

15. (a) Write short notes on
  - (i) Radio isotopes
  - (ii) Half life.

Or

- (b) Explain scintillation counter.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. Describe the types of centrifugation.
17. Write the principle, detection and uses of Thin layer chromatography.
18. Describe SDS – PAGE.
19. Explain the principle and mechanism of colorimeter. List out their applications.
20. Write an essay on Autoradiography.