

S.No. 3194

P 16 MBE 1 A

(For candidates admitted from 2016–2017 onwards)
M.Sc. DEGREE EXAMINATION, NOVEMBER 2022.

Microbiology – Elective

BIOLOGICAL TECHNIQUES

Time : Three hours

Maximum : 75 marks

SECTION A — (10 × 2 = 20)

Answer ALL questions.

Define / Comment on :

1. Bright field microscope
2. Atomic force microscope
3. Biosensors
4. Potentiometric analysis
5. Paper chromatography
6. HPLC
7. Electrophoresis
8. Electroendo osmosis
9. Electroporation
10. Restriction digestion

SECTION B — (5 × 5 = 25)

Answer ALL questions, choosing either (a) or (b).

11. (a) Explain briefly about dark field microscopy.
Or
(b) Write a short note on microtomy.
12. (a) Add a short note on atomic absorption spectrophotometer.
Or
(b) Describe about conductimetric analysis.
13. (a) Give a brief account on gel permeation chromatography.
Or
(b) Write about the principle behind ion exchange chromatography.
14. (a) Explain briefly about SDS-PAGE electrophoresis.
Or
(b) Write a brief note on rocket immuno electrophoresis.
15. (a) Add short note on real time PCR.
Or
(b) Write briefly about gene cloning.

SECTION C — (3 × 10 = 30)

Answer any THREE questions.

16. Discuss in detail about Transmission Electron microscope.
17. Write about the principle behind the various centrifugation techniques and elaborate its applications.
18. Give an account on principle and application of GC-MS.
19. Write elaborately about 2D gel electrophoresis.
20. Write in detail about detecting clones.