



QP CODE: 24027214



24027214

Reg No :

Name :

**B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE
EXAMINATIONS, OCTOBER 2024**

Third Semester

B.Sc Botany Model II Plant Biotechnology

VOCATIONAL COURSE - BO3VOT29 - BIOTECHNIQUES AND INSTRUMENTATION

2017 Admission Onwards

90C5BA95

Time: 3 Hours

Max. Marks : 60

Part A

*Answer any **ten** questions.*

*Each question carries **1** mark.*

1. What is the magnification obtained if we use 10X ocular and 40 X objective in a microscope?
2. Give examples of two fluorochromes.
3. Mention two electron sources in an electron microscope.
4. Define sedimentation coefficient.
5. What is an ultracentrifuge?
6. Define differential centrifugation.
7. What is AGE?
8. What is the importance of SDS in SDS- PAGE?
9. What does TLC refer to?
10. Give one example for gel filtration column matrix.
11. Write two differences between colorimeter and spectrophotometer.
12. If you get an absorption maximum at 260nm from a tissue sample after extraction procedure, what might have extracted from that sample?

(10×1=10)





Part B

Answer any **six** questions.

Each question carries **5** marks.

13. Briefly explain the sample preparation procedure for TEM.
14. Explain SEM procedure.
15. Explain the parts of the centrifuge.
16. What is velocity gradient centrifugation?
17. Give five applications of electrophoresis.
18. Briefly explain the principle of isoelectric focussing.
19. Write a note on the applications of chromatographic techniques.
20. Write a short note on the difference between HPLC and GLC.
21. Briefly explain electromagnetic spectrum and the importance of each wave in the spectrum.

(6×5=30)

Part C

Answer any **two** questions.

Each question carries **10** marks.

22. Explain different light microscopic techniques.
23. Write an essay on different centrifugation techniques based on density gradient.
24. Explain two dimensional gel electrophoresis in detail.
25. Write an essay on various column chromatography methods.

(2×10=20)

