23104290

QP CODE: 23104290

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / IMPROVEMENT / REAPPEARANCE EXAMINATIONS, JANUARY 2023

Third Semester

B.Sc Botany Model II Plant Biotechnology

VOCATIONAL COURSE - BO3VOT29 - BIOTECHNIQUES AND INSTRUMENTATION

2017 Admission Onwards

3B487CA8

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. What is an objective lens?
2. Write two applications of dark field microscopes.
3. Mention the microscope in which you can find phase plate and condenser annulus?
4. Write two applications of centrifugation technique.
5. Which type of centrifuge can be used to separate various cell organelle in a density gradient?
6. What are the basic components of a centrifuge?
7. What is the importance of electrophoresis?
8. Define isoelectric focussing.
9. Mention one example for gel filtration column matrix.
10. What is GLC?
11. What is Electromagnetic spectrum?
12. Differentiate between photometry and colurimetry.

(10×1=10)

Part B

*Answer any **six** questions.*

*Each question carries **5** marks.*

13. What is the difference between fluorescent microscope and light microscope?
14. What are the steps involved in tissue preparation for electron microscopy?
15. What is velocity gradient centrifugation?
16. What is differential centrifugation?
17. Write a short note on agarose gel electrophoresis.
18. Write a short note on the gel casting for SDS PAGE.
19. Write a note on the applications of chromatographic techniques.
20. Comment on five applications of HPLC.
21. Describe the principle and working of infra red spectrophotometer.

(6×5=30)

Part C

*Answer any **two** questions.*

*Each question carries **10** marks.*

22. Write on different light microscopic techniques in detail.
23. Explain the centrifugation techniques based on density gradient in detail.
24. Explain in detail two dimensional gel electrophoresis.
25. Write an essay on the applications of different chromatographic techniques.

(2×10=20)