21102028

QP CODE: 21102028

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS)EXAMINATION, AUGUST 2021

Third Semester

B.Sc Botany Model II Plant Biotechnology

VOCATIONAL COURSE - BO3VOT29 - BIOTECHNIQUES AND INSTRUMENTATION

2017 Admission Onwards

51C00145

Time: 3 Hours Max. Marks : 60

Part A

*Answer any **ten** questions.*

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

1. What is the function of an condenser in a microscope?
2. Give two advantages of phase contrast microscope over a bright field microscope.
3. Define SEM.
4. What is sedmentation coefficient?
5. What are the two types of ultracentrifuge?
6. Define differential centrifugation.
7. What is PFGE?
8. What are the two techniques used for resolution in two dimensions in 2D gel electrophoresis?
9. Define Rf.
10. What do you mean by HPLC?
11. Name two electromagnetic waves having frequency greater than visible light.
12. What is photometry?

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. What are the difference between bright field and dark field microscope?

14. Explain the working of fluorescent microscope.

15. Write a short note on the parts of a centrifuge.

16. What is velocity gradient centrifugation?

17. Mention five applications of SDS PAGE.

18. What is the principle of isoelectric focussing?

19. Write a short note on ion exchange chromatography.

20. Briefly explain gel filteration chromatography.

21. Write a short note on the basic instrumentation of infra red spectrophotometer.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Write an essay one different electron microscopy techniques.

23. Explain the centrifugation techniques based on density gradient in detail.

24. Write an essay on agarose gel electrophoresis.

25. Comment on the difference between paper and thin layer chromatography.

(2×10=20)