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QP CODE: 22100623

Reg No : .....

Name : .....

B.Sc DEGREE (CBCS) REGULAR / REAPPEARANCE EXAMINATIONS, APRIL 2022

Third Semester

B.Sc Botany Model II Plant Biotechnology

VOCATIONAL COURSE - BO3VOT29 - BIOTECHNIQUES AND INSTRUMENTATION

2017 Admission Onwards

A9C636C5

Time: 3 Hours Max. Marks : 60

core

Part A

*Answer any **ten** questions.*

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

1. Give two differences between bright field and dark field microscope.
2. What is the magnification obtained if we use10X ocular and 60 X objective in a microscope?
3. Write one application of fluorescent microscope.
4. Give two factors that influence centrifugation.
5. Define ultracentrifuge.
6. What do you mean by velocity gradient centrifugation?
7. What is the importance of PFGE?
8. Name the two techniques used for resolution in two dimensions in 2D gel electrophoresis.
9. What do you mean by Rf?
10. Name the stationery and mobile phase used in paper chromatography.
11. What is Electromagnetic spectrum?
12. Define Beer Lambert's law.

(10×1=10)

Part B

*Answer any **six** questions.*

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

13. Explain the working of phase contrast microscope.
14. Describe the steps involved in tissue preparation for electron microscopy.
15. Write a short note on the parts of the centrifuge.
16. Write a short note on differential centrifugation.
17. Comment on five applications of SDS PAGE.
18. Write a short note on the principle of isoelectric focussing.
19. What is gel filteration chromatography? How it is done?
20. Give five applications of HPLC.
21. Briefly explain photometry and comment how it is related to colorimetry.

(6×5=30)

Part C

*Answer any **two** questions.*

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

22. Write an essay on compound microscope.
23. Explain different centrifugation techniques based on density gradient.
24. Explain agarose gel electrophoresis in detail.
25. What are the various column chromatography methods? Explain.

(2×10=20)