(Pages : 3) T – 3222

Reg. No. : .....

Name : .....

Second Semester B.Sc. Degree Examination, August 2024

First Degree Programme under CBCSS

Botany

Foundation Course II

BO 1221 : METHODOLOGY AND PERSPECTIVES IN PLANT SCIENCES

(2022 Admission Onwards)

Time : 3 Hours Max. Marks : 80

(Draw diagrams wherever necessary)

SECTION – A

I. Answer **all** questions in **one** or **two** sentences. Each question carries **1** mark.

Write short notes on :

1. *E. coli*
2. Astrobotany
3. Range
4. Standard error
5. SEM
6. Acetocarmine
7. Cryopreservation
8. Beer-Lamberts Law
9. Canada balsam
10. Whole mounts

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

II. Answer any **eight** of the following. Each question carries **2** marks.

11. Mention the contributions of K S Manilal.
12. What is green revolution?
13. What is variance? Write down the formulae.
14. What is progressive staining?
15. Mention the applications of camera lucida.
16. What are fixatives? Give an example.
17. What is a pH meter? What are its applications?
18. What is germ theory?
19. Explain micrometry.
20. Enlist different methods of data collection.
21. What is whole mounting technique?
22. List the parts of a colorimeter.

(8 × 2 = 16 Marks)

SECTION – C

III. Answer any **six** of the following. Each question carries **4** marks.

23. Compare systematic sampling and stratified sampling.
24. Write down the formula. Add a note on its merits and demerits of median.
25. Differentiate between rotary and sledge microtome.
26. Comment on the uses of dehydrating agents.
27. Compare smear and squash preparations.
28. Comment of white revolution.

29. Discuss the various applications of buffer in biological research.

30. What is PAGE? Explain its procedure.

31. Compare density gradient centrifugation and differential centrifugation.

(6 × 4 = 24 Marks)

SECTION – D

IV. Write essay on any **two** of the following. Each question carries **15** marks.

32. Describe histogram, frequency curve, frequency polygon in detail.

33. Describe formulae, procedure, assumptions and applications of chi-square test.

34. Explain the working of a phase contrast microscopy.

35. Discuss the various types of chromatography.

(2 × 15 = 30 Marks)
