

(Pages : 3)

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Reg. No. :

Name :

First Semester B.Sc. Degree Examination, November 2024

Career Related First Degree Programme under CBCSS

Group 2 (a) – Botany and Biotechnology

Vocational Course

BB 1171 — MICROBIOLOGY

(2019 – 2022 Admission)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Answer **all** the questions in a word or **one** or **two** sentences. Each question carries **1** mark

1. What is biovar?
2. Write the function of peptidoglycan cell wall.
3. Define virology.
4. What are alkalophiles?
5. Mention the importance of mycorrhiza.
6. What is stab culture?
7. List any two applications of fed batch culture.

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8. Identify the use of Azospirillum.
9. What is dry heat method of sterilisation?
10. What is Nif gene?

(10 × 1 = 10 Marks)

SECTION – B

Answer **any eight** questions. Each question carries **2** marks. (Answer not to exceed **1** paragraph)

11. What are the major contributions of Pasteur?
12. Give note on Bergey's manual.
13. What is sporulation?
14. List the features of prokaryotic cells.
15. What is gram negative bacteria?
16. Explain viral culture.
17. Write the beneficial role of methanogenic bacteria.
18. Explain spread plate technique.
19. What is meant by biological nitrogen fixation?
20. Comment on thermophiles.
21. What is batch culture?
22. Explain the phases of bacterial growth curve.

(8 × 2 = 16 Marks)



SECTION - C

Answer **any six** questions. Each question carries 4 marks. (Answer not to exceed **120** words).

23. Discuss on the diversity of microbial world.
24. Classify bacteria based on nutritional requirements.
25. Compare and contrast lytic and lysogenic life cycles.
26. Discuss the general characteristics and structure of virus.
27. Enumerate the biotechnological application of extremophiles.
28. What are biofertilizers? Explain its types and applications.
29. Write a note on different pure culture methods.
30. What is bacterial culture media? Discuss on its types and uses.
31. Explain the methods adopted for anaerobic bacterial culture.

(6 × 4 = 24 Marks)

SECTION – D

Answer **any two** questions. Each question carries **15** marks. (Answer not to exceed **3** pages).

32. Give a detailed account on chemical and physical methods of sterilization.
33. Explain the structure of T4 bacteriophage with illustration.
34. Explain the role of microbes in biogeochemical cycles.
35. Write an essay on membrane structure of bacteria and its importance in medicine.

(2 × 15 = 30 Marks)

