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N – 4245

Reg. No. :

Name :

First Semester B.Sc. Degree Examination, June 2022
Career Related First Degree Programme under CBCSS
Botany and Biotechnology
BB 1171 : MICROBIOLOGY
(2020 Admission Onwards)

Time : 3 Hours

Max. Marks : 80

SECTION – A

Very short answer type. Maximum **two** sentences. Answer **all**.

1. Define axoneme.
2. What is Biofuel?
3. What is aerobic respiration?
4. Define sterilization.
5. Comment on acidophile.
6. Define biovars.
7. What is CFU?
8. What is Lipopolysachharide?
9. Give note on Bacteriophages.
10. Explain Log Phase.

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

Short answer questions. Not exceed in **one** paragraph. Answer **any eight**.

11. What is LB medium?
12. Comment on Azospirillum.
13. Give note on Macronutrient.
14. Enlist the contributions of Louis Pasteur.
15. What are thermophiles?
16. What is meant by Inoculate?
17. Define prokaryote.
18. What is meant by turbidimetric growth measurement?
19. Explain Streak plate.
20. What is the significance of Ectomycorrhiza?.
21. Give note on Gram negative bacteria.
22. What is differential media?
23. Explain Sporulation.
24. What are facultative anaerobes?
25. Explain Nitrification.
26. Define methanogens.

(8 × 2 = 16 Marks)

SECTION – C

Short essay. Not to exceed **120 words**. Answer any **six**.

27. Give note on the structure of T4 bacteriophage.
28. Discuss various factors that affect growth of microbes.
29. Differentiate between batch culture and fed batch culture.
30. Describe the features of extremophiles with examples.
31. Write a note on structure of eukaryotic cell.
32. Briefly define the aerobic culture technique.
33. Write a short note on Bergey's manual.
34. Differentiate between sterilization and disinfection.
35. Describe viral culture.
36. Give note on Synchronous bacterial culture.
37. Write note on gram staining methods.
38. Comment on the phosphorus cycle.

(6 × 4 = 24 Marks)

SECTION – D

Long essay. Answer any **two** questions.

39. Describe in detail Lytic and Lysogenic life cycles of a bacteriophage.
40. Write a short essay on the structure of Gram positive and Gram negative bacteria.
41. Describe in detail different types of sterilization techniques.

42. Explain the various types of biogeochemical cycles.
43. Describe various approaches in classification of bacteria.
44. Write an essay on ultra-structure and functions of flagella.

(2 × 15 = 30 Marks)
