

(Pages : 3)

R – 3335

Reg. No. :

Name :

Second Semester B.Sc. Degree Examination, September 2023

Career Related First Degree Programme under CBCSS

Botany and Biotechnology

BB 1271 : MICROBIAL METABOLISM, GENETICS AND DISEASES

(2015 – 2018 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. Name any two endospore producing bacteria.
2. What is fertility factor?
3. What is an auxotroph?
4. What is leghaemoglobin?
5. Where does Krebs cycle take place in bacterial cell?
6. Name any two human diseases caused by virus.
7. What is Shigellosis?
8. What are Hfr strains?
9. What are enterotoxins?
10. What is Leptospirosis?

(10 × 1 = 10 Marks)

P.T.O.

SECTION – B

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

11. Explain Ames test.
12. What is yellow fever?
13. Write short notes on carboxysomes.
14. Comment on pigments in bacteria.
15. Write short note on replica plating technique.
16. What do you meant by proton motive force?
17. Name any two foodborne bacterial diseases and their causative organisms.
18. Differentiate autotrophs and heterotrophs with suitable examples.
19. Discuss the mechanism behind transferable drug resistance?
20. Differentiate episomes and prophage.
21. Explain briefly SOS repair mechanism in bacteria.
22. Differentiate auxotrophs and prototrophs.

(8 × 2 = 16 Marks)

SECTION – C

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

23. Give general characters of bacteria. Add a note on Archaeobacteria.
24. Discuss classification of microbes on the basis of nutritional types.
25. Describe fermentation and aerobic respiration in bacteria.

26. What do you meant by active transport? Explain the process of solute translocation in bacteria.
27. Explain various waterborne bacterial diseases and their preventive measures.
28. Write short note on bacterial electron transport chain.
29. What are plasmids? Comment on its different types and importance with suitable examples.
30. Comment on various soilborne bacterial diseases in humans.
31. Discuss bacterial photosynthesis.

(6 × 4 = 24 Marks)

SECTION – D

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

32. Describe different methods of bacterial recombination with suitable diagrams.
33. Explain various dermatoviral diseases in humans and its preventive measures.
34. Explain the steps of glycolysis and Kreb's cycle in bacteria with suitable illustrations.
35. What is meant by food poisoning? Explain various food and water borne bacterial diseases.

(2 × 15 = 30 Marks)