

**AO-115**

April-2022

B.Sc., Sem.-IV

**CC-204 : Microbiology  
(Diversity of Bacteria)****[Max. Marks : 50]****Time : 2 Hours]**

- Instructions :** (1) All questions in Section – I carry equal marks.  
 (2) Attempt any **three** questions in Section – I.  
 (3) Section – II is compulsory.

**Section – I**

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|----|--|---|
| 1. | (A) Describe the cell wall of Archaeobacteria.                   | 7 |
|    | (B) Explain the structure of Archaea cell membrane.              | 7 |
| 2. | (A) State the salient features of Methanogens.                   | 7 |
|    | (B) Describe Thermophilic Sulphur Metabolizers.                  | 7 |
| 3. | (A) Discuss <i>Cyanobacteria</i> .                               | 7 |
|    | (B) Explain salient features of <i>Nitrobacter</i> .             | 7 |
| 4. | (A) Discuss purple bacteria and purple non-sulphur bacteria.     | 7 |
|    | (B) Elaborate properties of colourless Sulphur bacteria.         | 7 |
| 5. | (A) Enlist the main properties of Gram-negative spiral bacteria. | 7 |
|    | (B) Explain diversity of family <i>Enterobacteriaceae</i> .      | 7 |
| 6. | (A) Discuss general attributes of genus <i>Pseudomonas</i> .     | 7 |
|    | (B) Write a brief note on Obligate parasites.                    | 7 |

7. (A) Discuss in detail endospore forming Gram-positive rods. 7  
(B) Explain Prosthecate and non-prosthecate bacteria. 7
8. (A) Discuss properties of any two Gram-positive irregular rods. 7  
(B) Write a note on Sheathed Bacteria. 7

### Section-II

9. Answer the following in 1-2 lines (any 8) : 8
1. Enlist Phylums in Domain Archaea.
  2. What is Pseudomurein ?
  3. What is Alba Protein?
  4. State example of Halophilic bacteria.
  5. Write significance of Nitrifying bacteria.
  6. Name any two Iron bacteria.
  7. Give two properties of Hydrogen bacteria.
  8. Give habitat of Magnetotactic bacteria.
  9. Define photoautotrophs.
  10. Give example of luminescent bacteria.
  11. State two properties of *Bdellovibrio*.
  12. Give example of Gram-negative cocci.
  13. What is Fruiting body ?
  14. Give example of Gram-positive non-spore forming rods.
  15. State example of nitrogen-fixing actinobacteria.
  16. Give example of gliding bacteria.