

20. (a) Write down the Bacterial isolation technique.

Or

- (b) How can you be controlling the microorganism growth by physical and chemical methods?

SECTION C — (3 × 10 = 30)

Answer any THREE questions.

21. Explain the external surface of Bacteria with suitable diagram.
22. Describe the electron microscope with proper diagram.
23. Enumerate the life cycle of yeast.
24. Write an essay about economic importance of algae.
25. Explain the different techniques to isolate Actinomycetes from rhizosphere and marine samples.
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S.No. 6929

P 22 MBCC 11

(For candidates admitted from 2022–2023 onwards)

M.Sc. DEGREE EXAMINATION, NOVEMBER 2023

Microbiology

GENERAL MICROBIOLOGY

Time : Three hours

Maximum : 75 marks

SECTION A — (20 marks)

Answer ALL questions

- I. (A) Multiple choice questions (5 × 1 = 5)
1. Who is the father of microbiology
- (a) Leeuwenhoek (b) Louis Pasteur
- (c) Edward Jenner (d) None of the above
2. Five kingdom concepts explained by
- (a) Hackles
- (b) Theophrastus
- (c) Bentham and hooker
- (d) Whitaker
3. Fungi has no
- (a) Nucleus (b) Ribosome
- (c) Plastids (d) Cell wall

4. Cyanobacteria otherwise called as
  - (a) Chlamydomonas
  - (b) Euglena
  - (c) Virus
  - (d) Blue Green Algae
5. Agar — Agar prepared from
  - (a) Algae
  - (b) protozoa
  - (c) Bacterial fermentation
  - (d) Fungi
- (B) Fill in the blanks : (5 × 1 = 5)
  6. After gram staining what is the colour of gram-positive bacteria under light microscope
  7. Bacteria has \_\_\_\_\_ ribosomes.
  8. Fungi is coming under the kingdom of plantae. Because of \_\_\_\_\_
  9. There are \_\_\_\_\_ classes in algal classification.
  10. Bacteria can be isolated by \_\_\_\_\_ dilution technique.
- II. Answer ALL questions : (5 × 2 = 10)
  11. Differentiate gram positive and gram -negative bacteria.
  12. Point out the difference between Dark field and Bright field microscope.
  13. What is meant by dimorphic fungi?

14. Define - Coenobium
15. What is fermentation?

### SECTION B — (5 × 5 = 25)

Answer ALL questions,  
choosing either (a) or (b)

16. (a) Describe the cell wall of bacteria with diagram.  
Or
  - (b) What are the differences between gram positive and gram-negative bacteria?
17. (a) What are the differences Between SEM and TEM.  
Or
  - (b) Write short notes about Bergey's manual
18. (a) Describe the fungi classification based on Alexopolus.  
Or
  - (b) Note down the general properties of viral capsids.
19. (a) Explain the structure and reproduction of Chlamydomonus.  
Or
  - (b) Write down the general characters of blue green algae with example.