

QP Code: 323006

Reg. No.....

**Third Semester B. Pharm Degree Regular/Supplementary
Examinations June 2024
Pharmaceutical Microbiology
(2017 Scheme)**

Time: 3 Hours

Max. Marks: 75

- *Answer all questions to the point neatly and legibly* • *Do not leave any blank pages between answers* • *Indicate the question number correctly for the answer in the margin space*
- *Answer all parts of a single question together* • *Leave sufficient space between answers*
- *Draw table/diagrams/flow charts wherever necessary*

Essays

(2x10=20)

1. Explain the methods of isolation of pure culture of bacteria and describe methods of preservation of pure culture.
2. Illustrate the principle and procedure involved in Gram's staining technique. Differentiate between the cell wall composition of Gram's positive and Gram's negative bacterial cell wall.

Short Notes

(7x5=35)

3. The contributions of Paul Ehrlich to the field of microbiology. List the applications of microbiology.
4. The principle and procedure involved in Voges–Proskauer test.
5. List the bacteriostatic evaluation tests for disinfectants and explain any two in detail.
6. With a neat-labeled diagram, explain the design of laminar airflow bench.
7. Enumerate the factors affecting microbial spoilage of pharmaceutical products. Explain any two factors among them.
8. Pharmaceutical preservatives.
9. The applications of cell cultures in pharmaceutical industry and research.

Answer Briefly

(10x2=20)

10. Cultivation of fungi
11. Sterilization method for medicated powders and thermolabile solutions.
12. Microorganisms used in the microbial assay of vitamin B₁₂ and Niacin.
13. Explain pasteurization
14. What are chemical indicators. Give two examples.
15. Differentiate between prokaryotes and eukaryotes.
16. Types of electron microscopes.
17. What are microaerophiles.
18. Give the structure of a virus.
19. What are cell lines. Types of cell lines.
