

**VINAYAKA MISSION'S RESEARCH FOUNDATION
(DEEMED TO BE UNIVERSITY), SALEM**

**B.PHARM. DEGREE EXAMINATION – JULY 2019
Third Semester**

PHARMACEUTICAL MICROBIOLOGY

Time : Three hours

Maximum: 75 marks

I. Write essays on any **TWO** questions: (2 x 10 = 20)

1. Explain the types of bacteria based on nutritional requirements.
2. What is Animal cell culture? Explain the general procedure for maintenance of animal cell culture.
3. Define microbial spoilage and write about factors affecting microbial spoilage of pharmaceutical products.

II. Write short answers on any **SEVEN** questions: (7 x 5 = 35)

4. Write a note on gaseous sterilization.
5. Differential culture media.
6. Various methods of reproduction of bacteria.
7. Write short on isolation of pure culture.
8. Classify disinfectants with an example.
9. Principles involved in different microbiological assay.
10. Classification of fungi.
11. Differentiate between G(+) and G(-) bacteria.
12. Sterility testing of ophthalmic products.

III. Write short notes on : (10 x 2 = 20)

13. Give examples of enrichment medium.
14. What is tyndallization?
15. Define synchronous growth.
16. Name the gaseous sterilants.
17. Examples of chemical indicators.
18. What is capsule?
19. Mention methods for standardization of amino acids.
20. Name the parts of Laminar Air flow.
21. Applications of colony counter technique.
22. Define the terms a) Sanitization b) Antisepsis.