

# Rajiv Gandhi University of Health Sciences, Karnataka

**Third Semester B. Pharm Degree Examination – 13-May-2025**

**Time: Three Hours**

**Max. Marks: 75**

## **PHARMACEUTICAL MICROBIOLOGY**

**Q.P. CODE: 5011**

Your answers should be specific to the questions asked

Draw neat labeled diagrams wherever necessary

All the questions are compulsory

### **LONG ESSAYS**

**2 x 10 = 20 Marks**

1. Define pure culture and explain the methods used for isolation of pure cultures.

**OR**

Explain the source, mechanism of sterilization, merit, demerits and applications of sterilization using ethylene oxide.

2. Discuss the evaluation of bactericidal activity of disinfectants.

### **SHORT ESSAYS**

**7 x 5 = 35 Marks**

3. Differentiate between prokaryotes and eukaryotes

**OR**

Write a note on cultivation of anaerobic bacteria.

4. Write the procedure, merits and demerits of radiation sterilization.

**OR**

Write the principle and procedure of Gram staining.

5. Describe steps involved in replication of virus.

6. Describe the sources of contamination in aseptic area and their prevention.

7. Outline the process of assessment of new antibiotics.

8. Discuss the types and sources of spoilage in pharmaceutical products

9. Explain the general requirements for a cell culture laboratory

### **SHORT ANSWERS**

**10 x 2 = 20 Marks**

10. List the contributions of Louis Pasteur.

11. What is the role of agar in culture media?

12. Name four stains used in microbiology

13. Classify fungi based on morphology.

14. Differentiate between disinfection and antisepsis

15. Explain sterility testing of ophthalmic preparations.

16. Define bacterial growth curve.

17. Name four examples of preservatives in pharmaceutical products.

18. List the signs of microbial contamination in pharmaceutical products

19. Classify viruses.

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