

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B.Pharm Degree Examination – Mar 2013

Time: Three Hours**Max. Marks: 80 Marks**

PHARMACEUTICAL MICROBIOLOGY & BIOTECHNOLOGY (Revised Scheme - 2)

Q.P. CODE: 1957

Your answers should be specific to the questions asked
Draw neat labeled diagrams wherever necessary

LONG ESSAYS (Answer any Two)**2 x 10 = 20 Marks**

1. Explain the different process variables in fermentation technology. Describe the production of vitamin B₁₂.
2. Explain different pure culture techniques.
3. Describe the process of sterility testing. Add a note on media used, controls and sampling for the same.

SHORT ESSAYS (Answer any Eight)**8 x 5 = 40 Marks**

4. Write a note on validation of filters used for sterilization.
5. Classify disinfectants giving examples for each class and its mechanism of action.
6. What is viable count? Describe the methods for determination of viable count.
7. List out different enzymes used in recombinant DNA technology. Explain the purpose of use.
8. Explain 'Simple synthetic' and 'selective media' giving examples.
9. List out the characters that differentiate endospores from vegetative bacteria.
10. Explain the importance of staining techniques for identifying bacteria.
11. Describe the method for preparation of tetanus toxoid.
12. Explain the principle and end point determination of microbiological assay of vitamin B₁₂.
13. What are mutations? Explain its types.

SHORT ANSWERS**10 x 2 = 20 Marks**

14. Actinomycetes
15. Fungi imperfecti
16. Envelope of virus
17. Immunoglobulin G
18. Hapten
19. Limitations of heat sterilization methods
20. Decimal reduction time
21. Four typical features of prokaryotic cell
22. Medium for selection of hybridoma cells
23. Role of Agar in culture media
