

Rajiv Gandhi University of Health Sciences, Karnataka

II Year B. Pharm Degree Examination – 07-Jan-2020

Time: Three Hours**Max. Marks: 70 Marks****PHARMACEUTICAL MICROBIOLOGY AND BIOTECHNOLOGY (RS - 4)****Q.P. CODE: 2631**

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. Classify bacteria on the basis of nutritional requirements and add a note on raw materials used for preparation of culture media. (4+6)
2. What are sterilization indicators? Mention indicators used for various sterilization methods.
3. Explain the source, mechanism of sterilization merit, demerits and applications of sterilization using gamma radiations. (1+3+2+2+2)

SHORT ESSAYS (Answer any Six)**6 x 5 = 30 Marks**

4. Write a note on cultivation of virus.
5. Write in detail the production of Tetanus toxoid.
6. What is MIC? Explain the method for its determination.
7. Describe production of vitamin B₁₂.
8. Write briefly on various tools used in rDNA technology.
9. Write the causative organism, mode of transmission, sign, symptoms and treatment of tuberculosis.
10. Write a note on cultivation of anaerobic bacteria.
11. Write in detail the production of BCG vaccine.

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

12. Write contributions of Robert Koch.
13. Write functions of cytoplasmic membrane.
14. Mention any four applications of dry heat sterilization.
15. Define immunity.
16. Write significance of H and O antigens.
17. Write difference between vaccines and sera.
18. Write the applications of monoclonal antibodies.
19. Write the significance of animal cell culture.
20. What is the use of sparger and impellor in a fermentor?
21. Write equation for determination of Redial Walker coefficient.
