

Rajiv Gandhi University of Health Sciences, Karnataka
Sixth Semester B. Pharm Degree Examination – 14-Dec-2020

Time: Three Hours

Max. Marks: 75 Marks

PHARMACEUTICAL BIOTECHNOLOGY

Q.P. CODE: 5027

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. What are biosensors? Write its principle and its functions.
2. Write in detail the production of Insulin by genetic engineering method.
3. Write in detail the different types of fermenters and its applications.

SHORT ESSAYS (Answer any Seven)

7 x 5 = 35 Marks

4. How to make sodium alginate beads in calcium chloride solution?
5. What is PCR? Write the working principle of PCR.
6. Explain the structure of immunoglobulins.
7. Write the production of killed bacterial vaccines.
8. Write the production of monoclonal antibodies.
9. Write in brief the western blotting technique and mention its application.
10. Write in brief about transformation with suitable examples.
11. Write briefly about different types of mutation and give its significance.
12. Write in brief the Collection, Processing and Storage of whole human blood.

SHORT ANSWERS (Answer All)

10 x 2 = 20 Marks

13. Name any four natural polymers used for immobilization.
14. Name any four disadvantages of immobilization.
15. Write any four applications of interferons.
16. Define toxoids. Give two examples.
17. Name any two blood products with applications.
18. What is hypersensitivity? Write the types.
19. What is microbial biotransformation? Give two examples.
20. What is downstream processing? Give two examples.
21. Expand ELISA and write two applications.
22. Applications of plasma substitutes.
