

Rajiv Gandhi University of Health Sciences, Karnataka

Sixth Semester B. Pharm Degree Examination – 12-Jun-2024

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.

All the Questions are compulsory.

LONG ESSAYS

2 x 10 = 20 Marks

1. Describe any three methods of enzyme immobilization. Illustrate the applications of immobilised enzymes in medicine and production of pharmaceuticals.

OR

Describe the production of insulin by recombinant DNA technology.

2. Describe the different methods of fermentation. Explain the production of griseofulvin by fermentation technology with a neat labelled flow chart.

SHORT ESSAYS

7 x 5 = 35 Marks

3. Describe the production and uses of penicillinase. List out advantages of production of enzymes from microbial sources.

OR

Explain the production of hepatitis B vaccine by rDNA technology.

4. What are restriction enzymes? Explain the types and their role in genetic engineering.

OR

Explain different types of mutations.

5. Describe the production of monoclonal antibodies by hybridoma technology.
6. Outline the general method for the preparation of bacterial toxoids.
7. What are vaccines? Classify the types with examples.
8. Describe the Southern blot test with its applications.
9. What is transduction? Explain the methods.

SHORT ANSWERS

10 x 2 = 20 Marks

10. List out any four applications of enzymes in medicine.
11. Write any four advantages of immobilised enzymes.
12. What is cellular immunity?
13. What is protected fermentation?
14. What is immune suppression? Give two examples for immunosuppressive agent.
15. Write any four properties of Immunoglobulin G.
16. What are the conditions for storage of official vaccines?
17. What are Transposons?
18. Write any two applications of ELISA.
19. What do you mean by conjugation and transformation?
