

B.PHARM, THIRD YEAR, SECOND SEMESTER EXAMINATION 2024

Time: 3Hrs.

F.M.: 75

Subject: PHARMACEUTICAL BIOTECHNOLOGY

Answer any FIVE of the following questions:

1. Write the therapeutic importance of Penicillin with its mechanism of action. What is 6-APA? Write the structure and its application in pharmaceutical industry. 5+4+9 =15
2. Elaborate the application of Recombinant DNA Technology in Health Care Sector. Define Gene Cloning and its steps schematically. 6+2+7=15
3. Define Immunotechnology. What is hypersensitivity reaction? Explain the different types of hypersensitivity reaction. What are Immunoglobulins? Draw and explain the structure of an immunoglobulin. 2+3+4+2+4=15
4. Write short notes on **ANY THREE** 5x3=15
 - a) Replica Plating Technique.
 - b) Autoimmune disorder.
 - c) Type of Immunoglobulins.
 - d) Anaphylactic Shock.
5. What is Penicilloic acid? Write a brief note on bacterial resistance to antibiotics. Write the therapeutic importance of Clavulanic acid. 3+7+5=15
6. Explain the different steps in PCR with proper explanation. How many new DNA strands will be synthesized after 10 cycles of PCR? Write down the applications of PCR. 7+3+5=15
7. Define Vectors in RDT. Enlist properties to be a good vector. Write note on the following:
 - a) Restriction Endonuclease
 - b) DNA Ligase.2+3+5+5=15