Shree H. N. Shukla Institute of Pharmaceutical Education and Research, Rajkot

B. Pharm
Semester-V

Subject Name: Pharmaceutical Biotechnology
Subject Code: BP505TT

Chapter-1

1. What is enzyme immobilization? Give its advantages and disadvantages and methods.
2. Explain type of biosensor in detail with diagram.
3. Explain pharmaceutical application of biosensors.
4. Define protein engineering? Give its working principle.
5. Give the historical background of genetic engineering.
6. Write the process of genetics engineering

Chapter-2

1. Write a shot note on plasmid.
2. Write short note on Vector.
3. Discuss a short note on expression vector.
4. Discuss step involved in insertion of target DNA into a vector.
5. Write note on identification and isolation of recombination genes.
6. Give the application of rDNA technology and genetic engineering in the production of interferon.
7. Explain in detail about Hepatitis.
8. Explain in detail about PCR.
9. What is hormonal insulin write a note on it.

Chapter-3

1. Write note on type of immunity.
2. Describe about immunoglobulin.
3. Write note on MHC.
4. Explain hypersensitivity in detail.
5. Explain preparation of Toxoid.
6. Explain preparation of antitoxin.
7. What is hybridoma technology
8. Describe preparation method of hepatitis vaccine with storage condition.
9. Describe preparation method of Polio Vaccine with storage condition.
10. Explain blood product and plasma in details.

Chapter-4

1. Define Immuno blotting technology.
2. Write note on Immunoblotting thechniques.
3. Write note on ELISA.
4. Write note on Western blotting technology.
5. Write note on Southern blotting technology
6. Write note on Northern blotting technology
7. Write difference between Eukaryotic and Prokaryotic.
8. Explain transduction and conjugation.
9. Explain Plasmid and transpons.
10. Explain application of biotransformation.

Chapter-5

1. Discuss about batch fermentation.
2. How fermenter is sterilized?
3. Write the factor affecting fermenter design.
4. Discuss bout production of glutamic acid.
5. Discuss the fermentation methods in details.
6. Explain large-scale production fermenter design.
7. Explain citric acid production.