

**ANNAI VIOLET ARTS AND SCIENCE COLLEGE
DEPARTMENT OF MICROBIOLOGY**

**CONTINUOUS INTERNAL ASSESSMENT – I (EVEN SEM.)
SUBJECT : BIOTECHNOLOGY AND GENETIC ENGINEERING**

**Prepared by
Ms. Meena M
Asst. Professor - MB**

**Class : III B.Sc., Microbiology
Max.Marks : 50**

**Date : 05.09.2022-FN
Sub. Code:**

**PART A (5 × 2 = 10 Marks)
Answer any FIVE questions**

1. Write brief note on Immobilized enzymes.
2. What is Microbial Biosensor.
3. Write account on substrates for Industrial enzyme production.
4. Define Enzyme engineering.
5. Comment on Interferon.
6. Write the structure of Insulin.
7. Short notes on Principle of Genetic Engineering.

**PART B – (2 × 5 = 10 Marks)
Answer any TWO questions**

8. Describe the advantages of using an Immobilized enzymes over a free enzymes.
9. Briefly explain the structure and production of Insulin.
10. Write an account on Principle and Applications of Genetic engineering.

**PART C – (3 × 10 = 30 Marks)
Answer ALL questions**

11. Write a detailed account on the Microbial production of Industrial enzymes.
12. Define Vaccine. Explain the different types of Vaccines and enumerate their advantages and limitations.
13. Elaborately discuss about the enzyme based sensor and their applications.