



Department of Genetic Engineering and Biotechnology
Faculty of Health and Life Sciences
B. Sc. (Hons.) in Genetic Engineering and Biotechnology
Final Examination Summer 2025

Course Code:
GEB 0512-1101

Course Title: Introduction to Genetic
Engineering and Biotechnology

Level and Term: L-1, T-1
Time: 02 Hours

Section: 252 (A+B)

Course Teacher Initial: KMH

Total Marks: 40

Splitting any answer is strictly prohibited

- | | | | Marks |
|---|---|------------------|-------|
| 1 | (a) Discuss the advantages of transgenic organisms and describe the process of producing transgenic organisms. | [CLO3, PLO2, C6] | 4 |
| | (b) Discuss in brief the key areas of biotechnology in medicine. | [CLO1, PLO2, C5] | 4 |
| 2 | (a) Elaborate the production of somatotropin using recombinant DNA technology. | [CLO2, PLO2, C6] | 4 |
| | (b) How is somatostatin biosynthesized and processed? | [CLO3, PLO2, C5] | 4 |
| 3 | (a) Explain the methods used for the production of human interferon using recombinant DNA technology. | [CLO1, PLO2, C2] | 4 |
| | (b) Classify vaccines and describe them. | [CLO4, PLO2, C4] | 4 |
| 4 | (a) Provide the examples of biotechnology-based chemicals and explain the methods of their production. | [CLO3, PLO2, C2] | 4 |
| | (b) Explain the concept of protein regulation. | [CLO3, PLO2, C4] | 4 |
| 5 | (a) Enlist the major types of blood products and explain the regulatory and ethical considerations of their production. | [CLO3, PLO2, C4] | 3 |
| | (b) Elaborate the steps involved in the production of blood products. | [CLO3, PLO2, C6] | 5 |