



Department of Genetic Engineering and Biotechnology
Faculty of Health and Life Sciences
B. Sc. in Genetic Engineering and Biotechnology
Midterm Examination Spring 2025

Course Code:
GEB 0512-1101

Course Title: Introduction to Genetic
Engineering and Biotechnology

Level and Term: L-1, T-1
Time: 1 hour 30 minutes

Section: 251 A, B

Course Teacher Initials: KMH, DFB
Total Marks: 25

Splitting any answer is strictly prohibited

- | | | Marks |
|---|--|-------|
| 1 | (a) Explain the terms genetic engineering and biotechnology [CLO1, PLO1, C2] and briefly outline the history. | 2 |
| | (b) Demonstrate the applications of genetic engineering and [CLO1, PLO2, C2] biotechnology. | 3 |
| 2 | (a) Write down three commercial products produced by [CLO3, PLO2, C6] biotechnological process. | 2 |
| | (b) Explain recombinant DNA technology and summarize the key [CLO2, PLO2, C2] steps in recombinant DNA technology. | 3 |
| 3 | (a) Illustrate the biological tools being used in recombinant DNA [CLO3, PLO2, C6] technology. | 2 |
| | (b) Define plasmid with appropriate diagram. [CLO3, PLO2, C2] | 3 |
| 4 | (a) Discuss on importance and challenges of [CLO2, PLO2, C4] commercialization of biotechnology in developing countries. | 2 |
| | (b) Write down a short note on DNA, RNA, Animal cell. [CLO3, PLO2, C2] | 3 |
| 5 | (a) Choose the key areas of biotechnology in medicine. [CLO3, PLO2, C3] | 2 |
| | (b) Briefly discuss on somatotropin and insulin hormones. [CLO3, PLO2, C6] | 3 |