



Department of Genetic Engineering and Biotechnology
Faculty of Health and Life Sciences
B. Sc. (Hons.) in Genetic Engineering and Biotechnology
Midterm Examination Summer 2026

Course Code: 0512-1203
Level and Term: L1, T2
Time: 1 Hour 30 minutes

Section: 261 (A)

Course Title: Basic Microbiology
Course Teacher Initials: DNH
Total Marks: 25

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|---|--|-------|
| 1 | (a) Define a microorganism. "Microorganisms are universal ancestor", - explain. [CLO1, PLO2, C1] | 3 |
| | (b) What are the four criteria of Koch's Postulates? [CLO1, PLO2, C1] | 2 |
| 2 | (a) Differentiate between bacteria and archaeobacteria based on key features. [CLO1, PLO1, C5] | 3 |
| | (b) Categorize algae based on their primary pigments with example. [CLO2, PLO1, C4] | 2 |
| 3 | (a) Classify and discuss microorganisms based on pH. [CLO2, PLO1, C2] | 3 |
| | (b) Define facultative anaerobes and aerotolerant anaerobes citing one example of each. [CLO1, PLO2, C1] | 2 |
| 4 | (a) What are pleomorphic bacteria? Write the characteristics of genus <i>Bacillus</i> . [CLO1, PLO1, C1] | 3 |
| | (b) Draw a labeled diagram of a typical bacterial cell showing its major organelles. [CLO1, PLO2, C6] | 2 |
| 5 | (a) Write short note on bacterial size. Describe subtypes of cocci bacteria based on their arrangement. [CLO2, PLO2, C2] | 3 |
| | (b) Discuss the applications of microbiology in modern science and technology. [CLO2, PLO2, C6] | 2 |