ourdiu.com | Shared by Takwane Tahsen Ahmmed Anon

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: 0512-1207
Level and Term: L-1, T-2
Time: 1 Hour 30 Minutes

Section: 261A

Course Title: Microbial Genetics
Course Teacher Initials: DMI
Total Marks: 25

Answer the following questions:

			Marks
1	(a) Explain the scope of microbial genetics and its applications in biotechnology.	[CLO1, PLO1, C2]	2.0
	(b) Discuss the process involved in the bacterial DNA replication with a diagram.	[CLO1, PLO1, C6]	3.0
2	(a) Define the plasmid. Draw and explain the structure of a plasmid.	[CLO2, PLO2, C1]	3.0
	(b) Briefly describe the importance and applications of plasmids in biotechnology	[CLO2, PLO2, C6]	2.0
3	(a) Explain the mechanisms and causes underlying antibiotic resistance in bacteria.	[CLO2, PLO2, C2]	3.0
	(b) Briefly discuss the types of plasmids based on function.	[CLO2, PLO2, C6]	2.0
4	(a) Differentiate between conjugation and transformation as mechanisms of horizontal gene transfer in bacteria.	[CLO3, PLO7, C2]	2.0
	(b) Elaborate the process of conjugation as a mode of genetic transfer in bacteria with a diagram.	[CLO3, PLO7, C6]	3.0
5	(a) Write the types of transformation of foreign genetic material.	[CLO4, PLO3, C1]	1.0
	(b) Describe the steps of artificial transformation process with diagram.	[CLO4, PLO3, C6]	4.0

ourdiu.com