Enrollment No:	Exam Seat No:
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C. U. SHAH UNIVERSITY Winter Examination-2022

Subject Name : Microbial Genetics

Subject Code: 4SC03MIG1 Branch: B.Sc. (Microbiology)

Semester: 3 Date: 22/11/2022 Time: 11:00 To 02:00 Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

Q-1		Attempt the following questions:	(14)
	,	Define Mutation.	1
	b)	What is curing of plasmids?	1
	c)	Name the scientist who discovered the mechanism of transposition.	1
	d)	What is gene mapping?	1
	e)	Name the codons responsible for nonsense mutation	1
	f)	What is jumping gene?	1
	g)	Give examples of physical mutagens.	1
	h)	Name the enzyme that used in conversion of DNA into RNA.	1
	i)	What is operon?	1
	j)	Enlist various mycophages.	1
	k)	How many base pairs are present in one turn of B-DNA?	1
	1)	Enumerate stages of lysogenic cycle.	1
	m)	Give examples of competent cells.	1
	n)	Define monohybrid cross.	1
Atten	npt any	four questions from Q-2 to Q-8	
Q-2		Attempt all questions	(14)
	1	Describe various types of mutations in detail.	7
	2	Compare and contrast: Lytic cycle and Lysogenic cycle with the help of a	7
		labeled diagram.	
Q-3		Attempt all questions	(14)
~ -	1	Write a detailed note on: Ames test.	7
	2	What is Suppressor mutation? Role of intragenic suppressors in	7
	-	mutations.	-
Q-4		Attempt all questions	(14)
Ψ.	1	What is plasmid? Classify bacterial plasmids in detail.	7



	2	Write a note on genome organization in Saccharomyces.	7
Q-5		Attempt all questions	(14)
	1	Compare a typical insertion sequence with a typical composite transposon in bacteria with the help of a labeled diagram.	7
	2	Explain Transformation in detail.	7
Q-6		Attempt all questions	(14)
	1	What is Conjugation? Explain conjugation in detail.	14
Q-7		Attempt all questions	(14)
_	1	Explain the importance of Ti plasmid.	7
	2	Describe uses of mutations in detail.	7
Q-8		Attempt all questions	(14)
-	1	Describe mechanism of generalized transduction.	7
	2	Describe hybrid dysgenesis in brief. How P elements lead to hybrid dysgenesis?	7

