Enrollment No: Exa	am Seat No:
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## **C.U.SHAH UNIVERSITY**Summer Examination-2018

**Subject Name : Microbial Genetics** 

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

Semester: 3 Date: 22/03/2018 Time: 02:30 To 05:30 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)
	a)	Define Transformation.	(1)
	<b>b</b> )	What is nonsense mutation?	(1)
	<b>c</b> )	Name any two mutagenic agent.	(1)
	<b>d</b> )	Give two use of mutation.	(1)
	<b>e</b> )	Expand pBR322.	(1)
	<b>f</b> )	What is F Plasmid?	(1)
	g)	What are colicinogenic plasmids?	(1)
	<b>h</b> )	What is AMES test?	(1)
	i)	What are Mutator genes?	(1)
	j)	What are P elements?	(1)
	<b>k</b> )	Define: Transposons.	(1)
	1)	Who gave Transformation Principle?	(1)
	m)	What is an Auxotrophic strain?	(1)
	n)	Define : Copy Number of Plasmid	(1)
Atten	npt any f	Four questions from Q-2 to Q-8	
Q-2		Attempt all questions	(14)
	a)	Explain generalized transduction with the help of a labeled diagram.	(7)
	<b>b</b> )	Write a note on Hybrid Dysgenesis.	(7)
Q-3		Attempt all questions	(14)
	a)	Write a note on classification of plasmids.	<b>(7</b> )
	<b>b</b> )	Write a note on Mutation and its types.	(7)
Q-4		Attempt all questions	(14)
	a)	Draw a labeled diagram of Lysogenic Cycle.	(4)
	<b>b</b> )	Explain Griffith's Experiment with labeled diagram.	<b>(7</b> )



	c)	Draw a labeled diagram of plasmid depicting its important characteristics.	(3)
Q-5		Write a note on various methods of genetic exchange.	(14)
Q-6			
Y v		Write a note on Transposable Elements.	(14)
Q-7		Attempt all questions	(14)
	a)	Explain Lytic cycle in Bacteriophage with a labeled diagram.	(6)
	<b>b</b> )	How do alkylating agents produce mutation?	(3)
	<b>c</b> )	Note on basic features of a plasmid.	(5)
Q-8		Attempt all questions	(14)
	a)	Write a note on Avery-Macleod-Mac Carty Experiment with a labeled diagram	(7)
	<b>b</b> )	Note Essential features of being an Ideal Vector for Cloning.	(3)
	<b>c</b> )	Draw a labeled diagram showing a Conjugation between F <sup>+</sup> and F <sup>-</sup> Plasmid.	<b>(4)</b>

