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

Subject Name: Recombinant DNA Technology

Subject Code: 4SC06RDT1 Branch: B.Sc. (Microbiology)

Semester: 6 Date: 07/05/2022 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)	What is Genetic engineering?	1
	<b>b</b> )	Write the Name of father of genetics.	1
	<b>c</b> )	Restriction Endonuclease or Restriction enzymes also known as	1
	d)	Enlist Cloning vectors.	1
	<b>e</b> )	Agrobacterium mediated Gene transfer is direct method. True or False?	1
	f)	Give full form of SDS PAGE.	1
	<b>g</b> )	Write down Difference between RT PCR and PCR	1
		Define Recombinant Vaccine.	1
	i)	Define DNA library.	1
	<b>j</b> )	Give the application of cDNA library	1
		What do you understand by blotting?	1
	1)	What is Transgenic organisms?	1
		What is the role of Kinase Enzyme?	1
	n)	Define: Recombinant DNA Technology?	1
Attemp	pt any	four questions from Q-2 to Q-8	
Q-2		Attempt all questions	(14)
	a)	Write detail note on Milestones of Genetic Engineering.	07
	<b>b</b> )	Write detail note on DNA modifying Enzymes and their applications.	07
Q-3		Attempt all questions	(14)
	a)	What is cloning and cloning vector? Write detail note on types of cloning	07
	,	vector with structure and characteristics. (Any two)	
	b)	What is Expression vector? Write detail note on Baculovirus based vector.	07
Q-4		Attempt all questions	(14)
	a)	What is Gene transfer? Write detail note on direct gene delivery system.	14



## (Any three)

Q-5	Attempt all questions	(14)
<b>a</b> )	Write a detail note on Agarose gel electrophoresis.	07
<b>b</b> )	Explain in detail Southern blotting technique with its application.	07
Q-6	Attempt all questions	(14)
a)	What do you mean by PCR? Write detail note on RT PCR.	07
<b>b</b> )	Explain about Sanger's method of DNA sequencing	07
Q-7	Attempt all questions	(14)
a)	What is Gene library? Write detail note on construction of gene library.	14
Q-8	Attempt all questions	(14)
<b>a</b> )	Write a detail note on Recombinant product of human therapeutic. (Any one).	07
<b>b</b> )	Write detail note on Bt transgenic cotton.	07

