Enrollment No:	Exam Seat No:
	C.U.SHAH UNIVERSITY

Summer Examination-2016

Subject Name: Biomolecular Engineering

Subject Code: 4SC05BME1 Branch: B. Sc.(Microbiology)

Semester :5 Date :21/04/2016 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:

(1x14=14)

- a) What id rDNA?
- **b)** What is HindIII?
- c) What do you mean by copy number of a plasmid?
- **d)** What is the full form of MCS?
- e) What is ORI?
- **f**) What is vector in genetic engineering?
- **g)** What is Bt gene?
- **h**) Expand PCR.
- i) RDT stands for.....
- j) Why DNA has –ve charge?
- **k)** How different fragments of DNA are separated?
- 1) Un controlled growth of cells is known as.....
- m) Write the name of tumor inducing plasmid.
- n) How many chains are there in recombinant insulin?

Attempt any four questions from Q-2 to Q-8

Q-2 Attempt all questions

- a What is EtBr? Comment on its role in genetic engineering. 3+4
- **b** What do you mean by genetic engineering? Explain the role of genetic engineering in medical sciences.



2+5



Q-3			
		Write short notes on-	
	a.	Drug Delivery Systems	7
	b.	Nucleic Acid Hybridization	7
Q-4		What is +ve clone selection? Explain the process of IPTG/X-Gal selection.	(4+10)
Q-5			
		Write short notes on-	
	a.	Nanomedicine	7
	b.	Nucleases	7
Q-6			
		Write short notes on-	
	a.	Plasmids	7
	b.	Restriction digestion of DNA	7
Q-7		Attempt all questions	
	a.	Explain the biological methods used for synthesis for nano structures.	7
	b.	What is gene gun? Explain its role in gene cloning.	2+5
Q-8		Attempt all questions	
	a.	Write briefly about applications of biosensors.	7
	b.	How you will separate out the cloned DNA fragment form a plasmid.	7

