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

Summer Examination-2017

Subject Name: Molecular Biology

Subject Code: 4SC02MOB1 Branch: B.Sc.(All)

Semester: 2 Date: 09/05/2017 Time: 02:00 To 05:00 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)
	a)	What is the contribution of Avery, Macleod and Maccary?	1
	b)	What is central dogma of life?	1
	c)	Define Nucleoside.	1
	d)	Enlist difference of nitrogenous bases found in DNA and RNA.	1
	e)	Give name of double ring containing nitrogenous bases.	1
	f)	What is the full form of AMP?	1
	g)	How many phosphate groups are present in monomer of DNA?	1
	h)	What is the role of ligase?	1
	i)	Which multienzyme does polymerization during replication?	1
	j)	Initiation of replication occurs at which site?	1
	k)	DNA synthesis is semidiscontinuous and bidirectional. True or False?	1
	1)	Define transcription of DNA.	1
	m	Define posttranscriptional modification of RNA.	1
	n)	What are stop codons?	1
Atten	npt any	four questions from Q-2 to Q-8	
Q-2		Write notes on:	(14)
	a)	Historical perspective of discovery of DNA structure.	7
	b)	Organization of DNA in prokaryotes.	7
Q-3		Write notes on:	(14)
	a)	Salient features of DNA structure and draw a double helical DNA structure of B-	7
	ŕ	type with labels.	
	b)	Organelle DNA found in Eukaryotic cell.	7
Q-4		Attempt all questions	(14)
	a)	Write process of transcription in prokaryotes.	7
	b)	Write the processing steps followed for RNA after completion of transcription	7



process.

Q-5		Write notes on:	(14)
	a)	Enzymes of replication in prokaryotes.	7
	b)	Process of translation from mRNA to polypeptide chain in prokaryotes.	7
Q-6			
		Discuss in detail about the process of replication in prokaryotes.	14
Q-7		Attempt all questions	(14)
	a)	Enlist various differences found in replication process of Prokaryotes and eukaryotes.	7
	b)	Write a note on various RNA structures found in cell.	7
Q-8		Write notes on:	(14)
	a)	Process of regulation of expression with example of lac operon.	7
	b)	RNA polymerase enzyme. Discuss its role in prokaryote and eukaryote.	7

