## Enrollment No: \_\_\_\_\_ Exam Seat No: \_\_\_\_\_ C. U. SHAH UNIVERSITY Winter Examination-2020

## Subject Name : Chemical Structure & Macromolecules

Subject Code : 4SC01CSM2				Branch: B.Sc. (Microbiology)		
Semest	er : 1	Date :	12/03/2021	Time : 11:00 To 01:00	Marks : 50	
Instruct (1) (2) (3) (4)	ions: Use Instr Drav Assu	of Programmable uctions written or v neat diagrams a ume suitable data	calculator & an main answer l nd figures (if no if needed.	ny other electronic instrument is prohi book are strictly to be obeyed. ecessary) at right places.	bited.	
Q-1		Attempt the fol	lowing questio	ons:	(10)	
	a)	Which sugar is p	present in RNA	?	(1)	
	b)	Define: Chargaf	f's rule.		(1)	
	c)	What is an Epin	ner? Give one e	example.	(1)	
	d)	What do you me	ean by enantion	ners?	(1)	
	e)	What are optical	l isomers?		(1)	
	f)	Give an electron	nic configuratio	n of Al and B.	(1)	
	g)	Define: Anomer	·S.		(1)	
	h)	What is the com	position of nuc	eleosides?	(1)	
	i)	How many base	pairs are there	in one full turn of the DNA double he	(1)	
	j)	Which base is no	ot found in DN	A?	(1)	
Attemp	ot any	four questions f	from Q-2 to Q	-8		
Q-2		Attempt all que	estions		(10)	
	a)	Explain the high	lights of Watso	on and Crick DNA model.	(5)	

b) Explain structure and function of different types of RNA. (5)

Q-3		Attempt all questions	(10)	
	a)	Write a short note on properties of proteins.	(5)	
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	b)	Classify the proteins on the basis of their composition.	(5)
Q-4		Attempt all questions	(10)
	a)	Explain primary, secondary, tertiary and quaternary structure of protein.	(5)
	b)	Explain kjeldah'l method in detail with figure.	(5)
Q-5		Attempt all questions	(10)
	a)	Write a short note on Carius method for estimation of halogen with figure.	(5)
	b)	Explain classification of carbohydrates with example.	(5)
Q-6		Attempt all questions	(10)
	a)	Write a note on mutarotation with proper diagram.	(5)
	b)	<ul><li>Give the following reaction for glucose and fructose.</li><li>i) Osazone formation ii) Acetylation</li></ul>	(5)
Q-7		Attempt all questions	
	a)	Explain the rules for assigning electrons in atomic orbital.	(5)
	b)	Explain structure and function of different types of DNA.	(5)
Q-8		Attempt all questions	(10)
	a)	Explain derivatives of monosaccharides.	(5)
	b)	Describe the chemical and physical properties of nucleic acid.	(5)

