## C.U.SHAH UNIVERSITY Winter Examination-2018

Subject Name: Instrumental Methods of Analysis- II

	Subject	Code: 4SC04IMA1	Branch : B.Sc. (Microbio	logy)			
	Semester Instructio		Time : 10:30 To 01:30	Marks 70			
	(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) A	Assume suitable data if needed.					
Q-1		Attempt the following questions:			(14)		
	a)	Ni-column chromatography is general False	lly used as a purification tec	hnique. True/	1		
	<b>b</b> ) RNA has net charge. (positive /negative/neutral)				1		
	c) Sieve size can be changed by changing the % of agarose in agarose gel electrophoresis. True/ False						
	d) Agarose is used for the separation of a mixture of lipids. True/ False				1		
	<b>e</b> )	GC is a type of technique used to sepa		Protein)	1		
	<b>f</b> )	CBB staining is used to stain DNA.			1		
	<b>g</b> )	Two gel systems are used in SDSPAC			1		
	<b>h</b> )	Peptide bond is present in between an	nino acids. True/ False		1		
	i)	What is chromatogram?			1		
	j)	Western blot is associated with DNA. Gel electrophoresis can be used to sep			1		
	k) l)	Write full form of TLC.	arate the KINA. True/ Faise		1 1		
	m)	Write full form of PAGE.			1		
	n)	In gel electrophoresis DNA moves to	wards +ve electrode. True/	False	1		
Atte		our questions from Q-2 to Q-8.		i uibo	1		
Q-2	1	Attempt all questions			(14)		
	Α	Explain the process of RNA fragmen	1		7		
	В	What is isoelectric point? Explain its	importance in protein separa	ation.	7		
Q-3		Attempt all questions			(14)		
	A	Explain the process of protein fragme	-		7		
	В	Explain process of ion exchange chro	matography.		7		
Q-4		Write short notes on-			(14)		
	A	CBB staining			7		
	В	Gel filtration chromatography			7		

Q-5		Attempt all questions	(14)
	Α	Briefly explain silica gel chromatography with suitable diagram.	7
	B	What is silver staining? Explain the main steps of silver staining.	7
Q-6		Attempt all questions	(14)
	Α	What is DNA ladder? Explain its role in agarose gel electrophoresis.	7
	В	Briefly explain the applications of chromatography.	7
Q-7		Attempt all questions	(14)
•	Α	Briefly explain agarose gel electrophoresis with suitable diagram.	7
	B	Why SDS-PAGE is used for protein separation? Support your answer with suitable example.	7
Q-8		What is chromatography? Explain the basic principle and types of chromatography suitable diagram.	(4+10)

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