

C.U.SHAH UNIVERSITY

Summer Examination-2017

Subject Name : Instrumental Methods of Analysis- II

Subject Code: 4SC04IMA1 **Branch :** B.Sc.(Microbiology)

Semester: 4 **Date :** 18/04/2017 **Time :** 10:30 To 01:30 **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) Proteins are amphoteric compounds, that is, they contain both acidic and basic residues. True/ False	1
	b) DNA has net positive charge. True/ False	1
	c) Write full form of GC.	1
	d) Silver staining is used to stain proteins. True/ False	1
	e) Write full form of HPLC.	1
	f) What is Chromatography?	1
	g) Chromatography is a technique for the separation of a mixture by passing it in solution or suspension through a medium in which the components move at different rates. True/ False	1
	h) Write full form of DNA.	1
	i) Write the formula of a typical amino acid.	1
	j) Peptide bond is present in nucleotide chain. True/ False	1
	k) Write full form of PAGE.	1
	l) Write the function of comb in gel electrophoresis.	1
	m) Write full form of TLC.	1
	n) RNA is not a type of Nucleic acids. True/ False	1

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

Q-2	Attempt all questions	(14)
	A What is principle of Thin layer chromatography? Explain the applications of TLC.	7
	B Briefly explain paper chromatography with suitable diagram.	7
Q-3	Attempt all questions	(14)
	A What do you mean by gel filtration chromatography? Explain it with suitable diagram.	7
	B Explain types of chromatography.	7



Q-4	What is Gel electrophoresis? Explain agarose gel electrophoresis with suitable diagram.	(14)
Q-5	Write short notes on-	(14)
A	Explain Ion Exchange chromatography	7
B	SDS-PAGE	7
Q-6	Attempt all questions	(14)
A	Explain main components of HPLC.	7
B	Write a note on Gas chromatography.	7
Q-7	Attempt all questions	(14)
A	What is SDS? Explain its role and importance in poly acrylamide gel electrophoresis.	7
B	What is isoelectric point? Explain isoelectric focusing.	7
Q-8	Write short notes on-	(14)
A	Paper Chromatography	7
B	Blotting	7

