Enrollment No: _____ Exam Seat No:_____

C.U.SHAH UNIVERSITY
Winter Examination-2015

Subject Name : Instrumental Methods of Analysis -II

Subject Code : 4LS04IMA1 **Branch : B.Sc (**Microbiology)

Semester :4 Date : 20/12/2015 Time : 2:30To5:30 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)	Define: Sedimentation	1
b)	Define: centrifugal force	1
c)	Define: partition coefficient	1
d)	What is formula of Sedimentation coefficient	1
e)	Full form of HPLC	1
f)	What is basic principle of Chromatography.	1
g)	What is basic difference between HPLC and HPTLC?	1
h)	What is difference between column chromatography and paper chromatograpgy?	1
i)	What is centripetal force	1
j)	Write 4 different types of gel used in electrophoresis.	1
k)	What is column height.	1
l)	Write down equation to calculate partition coefficient.	1
m)	State principle of density gradient centrifuge.	1
n)	Write example of metrices, which can be used in affinity chromatography	1

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

Q-2 Attempt all questions (14)

A	What is principle of TLC?Explain the applications of TLC.	**7**
B	Explain Different types of paper chromatography in detail.	**7**

Q-3		**Attempt all questions**	**(14)**
	A	Explain 2D and 3D TLC in detail.	**7**
	B	Explain types of chromatography with principle.	**7**
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Q-4		**Attempt all questions**	**(14)**
	A	Compare and contrast partition chromatography and adsorption chromatography	**7**
	B	Write note on gel chromatography	**7**
Q-5		**Attempt all questions**	**(14)**
	A	Explain Ion Exchange chromatography	**7**
	B	Explain factors affecting electrophoresis.	**7**
Q-6		**Attempt all questions**	**(14)**
	A	Explain Instrumentation of HPLC.	**7**
	B	Write a note on application of HPTLC.	**7**
Q-7		**Attempt all questions**	**(14)**
	A	Write note onUltracentrifuge.	**7**
	B	Explain process in HPTLC.	**7**
Q-8		**Attempt all questions**	**(14)**
	A	Explain electrophoresis in detail.	**7**
	B	Write note on Different types of centrifuge.	**7**