Enrollment No: _____ Exam Seat No:_____

C.U.SHAH UNIVERSITY

Summer Examination-2020

Subject Name: Analytical Chemistry-I

Subject Code: 4SC03ANC1 **Branch: B.Sc. (Chemistry)**

Semester : 3 **Date : 03/03/2020** **Time : 02:30 To 05:30** **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: Fluorescence	**01**
	b)	Define: Stationary phase	**01**
	c)	Define: Chromatography	**01**
	d)	Define: Titration	**01**
	e)	Write the formula of R_f value.	**01**
	f)	If the light is emitted after _____ s of absorption, then the emitted light will known as phosphorescence.	**01**
	g)	What do you mean by EMF?	**01**
	h)	What is called singlet state?	**01**
	i)	Write the advantages of fluorimetry.	**02**
	j)	Write a short note on pH-scale.	**02**
	k)	What is quenching?	**02**

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

Q-2		**Attempt all questions**	**(14)**
	a)	Discuss about the classification of chromatography.	**05**
	b)	Write a note on Circular paper chromatography.	**05**
	c)	Explain Descending paper chromatography.	**04**
Q-3		**Attempt all questions**	**(14)**
	a)	Explain factors affecting fluorescence.	**07**
	b)	Discuss the theory of fluorescence	**07**
Q-4		**Attempt all questions**	**(14)**
	a)	Discuss the applications and limitations of fluorimetry.	**07**
	b)	Discuss the instrumentation of fluorimetry.	**07**
Q-5		**Attempt all questions**	**(14)**
	a)	Write a note on TLC.	**07**
	b)	Explain the Adsorption chromatography.	**07**

Q-6		**Attempt all questions**	**(14)**
	a)	What is an acid-base titration? Describe it in detail with suitable example.	**07**
	b)	Discuss the method for determination of dissociation constant of weak acid.	**07**
Q-7		**Attempt all questions**	**(14)**
	a)	What is an adsorbent? Discuss the types of adsorbent with suitable examples.	**05**
	b)	Discuss the choice of solvent.	**05**
	c)	Discuss about different methods for visualization in TLC.	**04**
Q-8		**Attempt all questions**	**(14)**
	a)	Explain Redox titration with any one example.	**07**
	b)	Discuss about weak acid and strong base titration curve in pH-metric method.	**07**