

Enrollment No: \_\_\_\_\_

Exam Seat No: \_\_\_\_\_

# C. U. SHAH UNIVERSITY

## Winter Examination-2021

Subject Name: Physical Chemistry-III

Subject Code: 4SC05PCH1

Branch: B.Sc. (Chemistry)

Semester: 5

Date: 20/12/2021

Time: 11:00 To 02:00

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.

<b>Q-1</b>	<b>Attempt the following questions:</b>	<b>(14)</b>
	a) What is triple point?	01
	b) What are colloids?	01
	c) Define: Normality	01
	d) Write a statement of Third law of thermodynamics.	01
	e) What is Lyophilic sol?	01
	f) Give the definition of Dialysis.	01
	g) State the limitation of Henry's Law in a single sentence.	01
	h) Define: Entropy	01
	i) What is Liquid junction potential?	01
	j) Define term Phase.	01
	k) Give the Dalton's law of Partial pressures.	01
	l) Write down the phase rule equation.	01
	m) Write the equation to find the ionic product of water.	01
	n) What is fugacity?	01

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

<b>Q-2</b>	<b>Attempt all questions</b>	<b>(14)</b>
	a) What is concentration cell? Name the types of concentration cell.	02
	b) Explain the concentration cell without transference.	07
	c) How to determine the valency of metal ions?	05
<b>Q-3</b>	<b>Attempt all questions</b>	<b>(14)</b>
	a) Write a note on Water system.	07
	b) Explain the phase diagram for two component system.	07
<b>Q-4</b>	<b>Attempt all questions</b>	<b>(14)</b>
	a) Explain the Brownian movement of colloids.	07
	b) Explain any two dispersion methods for preparation of sols	07
<b>Q-5</b>	<b>Attempt all questions</b>	<b>(14)</b>
	a) Write a note on Henry's law.	07
	b) Explain the Phenol-Water system.	07



