Enrollment No:	Exam Seat No:

## C. U. SHAH UNIVERSITY

## Winter Examination-2020

**Subject Name: Chemistry-I** 

Subject Code: 4SC01CHC1/4SC01CHE1 Branch: B.Sc. (All)

Semester: 1 Date: 15/03/2021 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.

Q-1		Attempt the following questions:	(14)
	<b>a</b> )	Define: Addition reaction	01
	<b>b</b> )	Write any two limitations of valance bond theory.	01
	c)	What do you mean by intensive properties?	01
	<b>d</b> )	What is hybridization?	01
	<b>e</b> )	Write decreasing order of ionization energy for electron present in s,p,d and f orbitals.	01
	f)	Define : Molaritry	01
	<b>g</b> )	Draw the chemical structure of cyclo pentane 1-carboxaldehyde.	01
	<b>h</b> )		01
	i)	What is electronegativity?	01
	j)	The total of mole fraction of solution is always	01
	<b>k</b> )	· · · · · · · · · · · · · · · · · · ·	01
	1)	Define: Electrophilic substitution reaction	01
	,	) What is known as isolated system?	01
		Define heterogeneous system	01
Atter	npt an	y four questions from Q-2 to Q-8	
Q-2		Attempt all questions	(14)
	<b>a</b> )	Explain SN <sup>2</sup> reaction with mechanism.	05
	<b>b</b> )	Write the reaction of Ethyl iodide reacts with Ag <sub>2</sub> O, KSH and Na <sub>2</sub> S	05
	<b>c</b> )	Discuss about the E2 reaction	04
Q-3		Attempt all questions	(14)
•	<b>a</b> )	Discuss any two methods for the preparation of large ring cyclo alkanes.	07
	<b>b</b> )	How to prepare cyclo alkanes by Freund's and Perkin's methods?	07



Q-4		Attempt all questions	<b>(14)</b>
	a)	How to prepare 250ml standard solution of Borax?	05
	<b>b</b> )	Write the Difference between part per thousand and part per million.	05
	c)	A sample of 0.60 gm of NaCl dissolved in water and made up to 100 mL calculate the Normality of this solution. (Na = $23$ , Cl = $35.5$ )	04
Q-5		Attempt all questions	(14)
	a)	What is buffer solution? Explain it with mechanism of acidic and basic buffer.	07
	<b>b</b> )	Write a note on Lowry-Bronsted acid base theory	07
Q-6		Attempt all questions	(14)
	a)	Explain Sp3 hybridization with an example.	07
	<b>b</b> )	Explain Covalent radius.	07
Q-7		Attempt all questions	(14)
	a)	Explain Sp <sup>3</sup> d <sup>2</sup> hybridization with an example.	07
	<b>b</b> )	Explain Ionization potential.	07
Q-8		Attempt all questions	(14)
-	a)	Explain the work obtained during isothermal change.	07
	<b>b</b> )	Write the difference between physisorption and chemisorptions.	07

