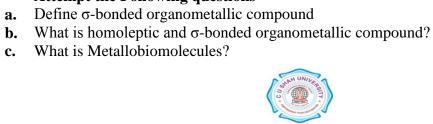
I	Enrol	lment No:	Exam Seat No:						
C.U.SHAH UNIVERSITY									
	Winter Examination-2022								
S	Subje	ct Name: Inorganic Chemistry-I							
9	Subje	ct Code: 5SC02ICH1	Branch: M.Sc. (Chemistry)						
9	Seme	ster: 2 Date: 19/09/2022	Time: 11:00 To 02:00 Marks: 70						
	 Use of Programmable calculator and any other electronic instrument is prohibited. Instructions written on main answer book are strictly to be obeyed. Draw neat diagrams and figures (if necessary) at right places. Assume suitable data if needed. 								
•	(•	, Tissume surtage data it needed.							
			SECTION – I						
Q-1		Attempt the Following question	S.	(07)					
	a.	What is the 'g' value for free elec	tron?	(1)					
	b.	Is deuterium ESR active or not?		(1)					
	c.	How much spectral line for NH ₃ a	nd ND ₃ .	(2)					
	d.	Define ion exchanger.		(1)					
	e.	Define polyatomic ion?		(1)					
	f.	Who made first synthetic organic	ion exchanger?	(1)					
Q-2		Attempt all questions		(14)					
	a.	Write note on instrumentation of	ESR?	(7)					
	b.	Write calculation of energies of Z		(7)					
0.2		Attompt all questions	OR	(1.4)					
Q-2		Attempt all questions One electron effected by three equ	nivalent proton	(14) (14)					
Q-3	a.	Attempt all questions	iivaiciii piotoii.	(14) (14)					
Q- 3	a.	Principle of ion exchange chroma	togranhy	(14) (7)					
	u. L	Describe setion exchange enfolia	· ·	(7)					

	1.	who made first synthetic organic fon exchanger:	(1)
Q-2		Attempt all questions	(14)
	a.	Write note on instrumentation of ESR?	(7)
	b.	Write calculation of energies of Zeeman level.	(7)
		OR	
Q-2		Attempt all questions	(14)
	a.	One electron effected by three equivalent proton.	(14)
Q-3		Attempt all questions	(14)
	a.	Principle of ion exchange chromatography.	(7)
	b.	Describe cation exchanger and anion exchanger	(7)
		\mathbf{OR}	,
Q-3		Attempt all questions	
	a.	Write advantages and disadvantages of ion-exchange chromatography.	(6)
	b.	Write note on ion exchange resin and ion exchange cellulose.	(8)



SECTION - II

Attempt the Following questions

Q-4

(07)

(1) (1) (1)

	d.	Which metal ion is essential for maintaining rhythm of heart?	(1)
	e.	Which are ultra-trace elements?	(1)
	f.	Give the name of essential macro minerals for body.	(1)
	g.	How many porphyrin ring in myoglobin?	(1)
Q-5		Attempt all questions	(14)
	a.	Write classification of essential elements based upon amount of needed.	(7)
	b.	Write roll of alkali and alkaline earth metal ion in biological system.	(7)
		OR	
Q-5		Attempt all questions	
	a.	Give the difference between σ -bonded and π -bonded OMC.	(8)
	b.	Write physical properties of η^2 -alkene complexes.	(6)
Q-6		Attempt all questions	(14)
	a.	Brief note on biological nitrogen fixation.	(14)
		OR	, ,
Q-6		Attempt all Questions	(14)
	a.	Introduction of Na-K pump.	(10)
	b.	Give any four preparation of σ -bonded OMC of transition metals.	(4)

