C. U. SHAH UNIVERSITY Winter Examination-2022

Subject Name: Inorganic Chemistry-I

	Subject	Code: 4SC03ICH1	Branch: B.Sc. (Chemistry))	
	Semeste	r: 3 Date: 23/11/2022	Time: 11:00 To 02:00	Marks: 70	
	Instruction (1)	Ons:	any other electronic instrument is pr	abibited	
	(1) (2)	Instructions written on main answer	book are strictly to be obeyed.	Smoned.	
	(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)	Who gave the Modern Periodic L	aw?	(1)	
	b)	Define Metallic radius?		(1)	
	c)	How many periods are in the periodic table?			
	d)	Give IUPAC name of elements have atomic number 110 and 111.			
	e)	Which boranes are quite stable and don't hydrolyze readily?			
	f)	Which oxidation state shown by all the actinides metals?			
	g)	Who gave the idea of 3c-2e bond	?	(1)	
	h)	Define kinetic stability.		(1)	
	i)	Full form of CFSE is		(1)	
	j)	Some salt of lanthanides are color	red due totransitions.	(1)	
	k)	Give the oxidation states of Lanth	anum.	(1)	
	I)	What is Lanthanides contractions	?	(1)	
	m)	is the most importan What is Transition element?	t mineral containing lanthanides.	(1)	
	11)	what is mainstrion element:		(1)	
Atte	empt any f	four questions from Q-2 to Q-8			
Q-2				(14)	
		Discuss Electronic configuration	and type of elements: s, p and d		
Q-3	5	Attempt all questions		(14)	
	a)	Explain thermodynamic stability.		(7)	
	b)	Discus experimental determinatio	n of stability constant by Job's meth-	od. (7)	

Q-4 Attempt all questions (14)Give preparation of Diborane (B_2H_6) . (06) a) Discuss the structure of Diborane. b) (08)

Q-5

Explain factors affecting the stability of metal complexes



(14)

Q-6	Attempt all questions		
a	a)	Discus lanthanide contraction.	
b))	Discus about ionic radii of actinides.	(7)
Q-7		Attempt all questions	(14)
a	a)	Write electronic configuration, name and symbol of any ten lanthanides.	(7)
b))	Write electronic configuration, name and symbol of any ten actinides.	(7)
Q-8		Attempt all questions	(14)
a	a)	Write uses of lanthanides.	(6)
b)	Discus oxidation state and color of actinides.	(8)

