C.U.SHAH UNIVERSITY **Summer Examination-2022**

Subject Name: Inorganic Chemistry-II

	Subject	Code: 4SC	C04ICH1	Branch: B.Sc. (Chemistry)	
	Semeste	er: 4	Date: 05/05/2022	Time: 11:00 To 02:00	Marks: 70
	Instructi (1) (2) (3) (4)	ons: Use of Prog Instructions Draw neat Assume su	grammable calculator & s written on main answe diagrams and figures (in itable data if needed.	& any other electronic instrument is pro- er book are strictly to be obeyed. f necessary) at right places.	hibited.
Q-1		Attempt	the following question	ns:	(14)
	 a) b) c) d) e) f) g) h) i) j) k) l) m) n) 	Write uni Give the Define ch Fe ³⁺ is m Give an e Coordina Define co Electroni Define L Why con What is co What is co Define E Give thir	it of magnetic moment. formula of any potash a nelating ligand. agnetically example of geometrical ation number of "Co" in pordination sphere. c configuration of Cr^{+1} igand. npound of ZnCl ₂ ion is organometallic compour operator? igen Value. d postulate of wave me	alum. 	 (1)
Atter Q-2	mpt any a) b)	four quest Attempt Describe Give IUF i) [PtCl4(ii) [CoBr iii) K[BF iv) [(NH v) Give t T vi) Give t D vii) Give D	ions from Q-2 to Q-8 all questions optical isomerism in 4 PAC name of below cor $NH_3)_2$] $(ONO)(en)_2$] ⁺ 4] $3)_5Co-NH_2-Co(NH_3)_4(H)$ he formula of this name etraamminecopper(II)st the formula of this name bicynoargentate(I)anion the formula of this name bicynoargentate(I)anion	and 6 coordinated complexes. nplexes. 42O)]Cl ₅ e ulphate ne de	(14) (7) (7)



Q-3	Attempt all questions		
	a)	Write note on structural isomerism.	(7)
	b)	Describe Werner's coordination theory.	(7)
Q-4		Attempt all questions	(14)
	a)	Discus catalytic properties, tendency to form complex and color of d-block elements.	(7)
	b)	Give name, symbol and electronic configuration of 3 rd transition metal series.	(7)
Q-5		Attempt all questions	(14)
-	a)	Give name, symbol and electronic configuration of 1 st transition metal series.	(7)
	b)	Discus atomic radii, ionic radii, molar volume and density of d-block elements.	(7)
Q-6		Attempt all questions	(14)
	a)	Derive equation when electron in a one dimension box.	(7)
	b)	Derive equation when electron in ring.	(7)
Q-7		Attempt all questions	(14)
-	a)	Describe additional operator, multiplication operator, linear operator and commutator.	(7)
	b)	Describe the structures of zeise salt and ferrocene.	(7)
Q-8		Attempt all questions	(14)
	2)	Describe geometrical isometrism in complex of coordination number 6	(6)
	a)	Describe geometrical isometrism in complex of coordination number 0.	(0)

