

C.U.SHAH UNIVERSITY

Winter Examination-2018

Subject Name: Inorganic Chemistry-II

Subject Code: 4SC04ICH1

Branch: B.Sc. (Chemistry,Physics)

Semester: 4

Date: 25/10/2018

Time: 10:30 To 01:30

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)
	a) Define: Ligand	01
	b) What is stereoisomerism?	01
	c) Define: Isomerism	01
	d) Define: Ionization isomerism	01
	e) Give the IUPAC nomenclature of $K_3[Fe(CN)_6]$.	01
	f) Define primary valences in coordination complexes.	01
	g) Write a full form of EAN.	01
	h) What is <i>d-d</i> transition in transition metals?	01
	i) Define: Transition metal	01
	j) Define: Alloy	01
	k) Give the one example of cis and trans isomers.	01
	l) Define: Atomic radii	01
	m) Write electronic configuration for Scandium (Sc) transition metal.	01
	n) Define: Zero potential energy	01

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

Q-2	Attempt all questions	(14)
	a) Write the classification of ligand.	04
	b) List the characteristics of primary valences.	05
	c) Explanation of the structure of Co(III) amines complex on the basis of Werner's coordination theory.	05
Q-3	Attempt all questions	(14)
	a) Discuss the Sidgwick's electronic concepts.	07
	b) Explain the different postulates of Werner's coordination theory.	07
Q-4	Attempt all questions	(14)
	a) Discuss the types of isomerism.	07



	b) Explain Werner's theory.	07
Q-5	Attempt all questions	(14)
	a) Explain geometrical isomerism in 6-coordinate complex compounds.	07
	b) Write a note on structural isomerism.	07
Q-6	Attempt all questions	(14)
	a) Write a note on Zeise salt $[\text{PtCl}_2\text{-C}_2\text{H}_4]$.	07
	b) Write basic postulates of quantum mechanics.	07
Q-7	Attempt all questions	(14)
	a) Discuss the properties and uses of Organo-Lithium.	07
	b) Explain any four physicochemical properties of transition metals.	07
Q-8	Attempt all questions	(14)
	a) Discuss the classification of d-block elements.	07
	b) Write a note on magnetic properties of transition metal ions.	07

