

C.U.SHAH UNIVERSITY

Wadhwan City

Subject Code : 5SCO2CHC1

Summer Examination-2014

Date: 18 /06/2014

Subject Name:- **Inorganic Chemistry**

Branch/Semester:-M.Sc(Chemistry)/II

Time:02:00 To 5:00

Examination: Regular

Instructions:-

- (1) Attempt all Questions of both sections in same answer book / Supplementary
- (2) Use of Programmable calculator & any other electronic instrument is prohibited.
- (3) Instructions written on main answer Book are strictly to be obeyed.
- (4) Draw neat diagrams & figures (If necessary) at right places
- (5) Assume suitable & Perfect data if needed

SECTION-I**Q-1 Answer the following short Questions (Compulsory) 7**

1. What is homoleptic organometallic compounds?
2. Give Reaction of anionic metal complexes with organic halides.
3. What is η^3 allyl(enyl) complexes.?
4. What is Elimination Reaction.?
5. Define Essential Elements.
6. Which are essential Bulk elements in bioinorganic chemistry.?

Q-2 (a) Discuss transmetallation reaction and insertion reaction in detail and insertion reaction in detail 5

(b) Give classification of π bonding ligands and discuss about preparation method of η^2 alkene complexes. 5

(c) Discuss the role of N,O,Ca,S 4

OR

Q-2 (a) Discuss Iodine and thyroid Hormons 5

(b) Discuss the toxic effects of Pb & As 5

(C) How NMR spectra are useful for study of alkene complexes in organometallic complex 4

Q-3(1) (a) How IR are useful for the study of alkene? 4

(b) Discuss Oxidative addition reaction 3

(2) Give the classification of element according to their action in biological system 7

OR

Q-3 (1) Explain Toxic effect of As & Cd 7

(2) Explain the Oxygen carrier and its significance. 7



SECTION-II

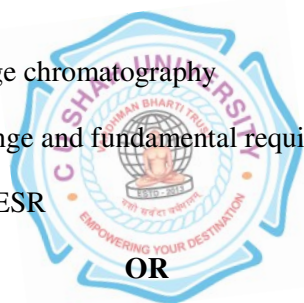
Q-4 Answer the following Short Questions

7

- (1) What is Ion Exchange chromatography?
- (2) What is disadvantage of Ion Exchange Chromatography?
- (3) What is Effluent?
- (4) Write uses of ion exchange chromatography
- (5) What is the value of 'g'?
- (6) In Q band ESR spectro_____around frequency is used (in mega Cycles /second).
- (7) In ${}^4_2\text{He}$, ${}^2_1\text{H}$, ${}^{15}_7\text{N}$ what is the value of I .Respectively?

Q-5

- (1) Give the applications of Ion exchange chromatography (5)
- (2) Give the properties of the ion exchange and fundamental requirements of useful resin (5)
- (3) Describe the free radicals study by ESR (4)



OR

- (1) Determine of 'g' value with calculation (5)
- (2) Write the factors affecting 'g' value (5)
- (3) Write a short note on Separation of Zinc & Magnesium on an anion exchanger (4)

Q-6

- (1) Discuss Ion exchange resins and Ion Exchange celluloses (7)
- (2) Write a detailed note on ion exchangers on the basic of functional groups of the resins (7)

OR

- (1) Discuss the 'ESR' Spectra of Hydrogen Molecule ion(H_2^+) (7)
- (2) Discuss the 'ESR' spectra of methyl radical (CH_3) (7)

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