

C.U.SHAH UNIVERSITY

Wadhwan City

Subject Code : **45CO1CHC1**

Summer Examination-2014

Date: 05/06/2014

Subject Name : Chemistry -I

Branch/Semester:- B.Sc(Pure Science)/I

Time:10:30 To 1:30

Examination : Remedial

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 Do as Directed.** (07)
- a) Define substitution and elimination reaction (02)
 - b) Define Nucleophile and Electrophile (02)
 - c) Define Atomic radii (01)
 - d) Define Ionic radii (01)
 - e) Give definition of Electronegativity (01)

- Q-2 Answer the following in detail.** (14)
- a) Discuss the SN_1 & SN_2 reaction with energy diagram (05)
 - b) Write a note on Dieckmann's Method (05)
 - c) Derive the Baeyer's Strain Theory (04)

OR

- Q-2 Answer the following in detail.** (14)
- a) Discuss the E_1 & E_2 reaction with their mechanism (05)
 - b) Discuss the Fund's Method (05)
 - c) Write a note on Sacshe-Mohr concept (04)

- Q-3 Answer the following in detail.** (14)
- a) Explain the Pauli's method for the determination of ionic radius of isoelectronic ions (07)
 - b) Write a note on Sabatier and Sanderson's Method (07)

OR

- Q-3 Answer the following in detail.** (14)
- a) Give the chemical and physical properties of cycloalkanes (07)
 - b) Give the brief note on i) Acyloin Condensation, ii) Perkin Method (07)



SECTION-II

- Q-4 Do as Directed** (07)
- a) Define system and surroundings (02)
 - b) Define molality and normality? (02)
 - c) What is adsorption? (01)
 - d) Define buffer solution (01)
 - e) Define oxidation and reduction? (01)

- Q-5 Answer the following in detail.** (14)
- a) Write a brief note Sidgwick Powell Rule (05)
 - b) Discuss the Magnetic Properties of transition metals (05)
 - c) What is system explain the different types of systems (04)

OR

- Q-5 Answer the following in detail.** (14)
- a) Explain the First Law of Thermodynamics and give mathematical equation (05)
 - b) Discuss the types of adsorption in detail (05)
 - c) What is pH? How to prepare buffer solution (04)

- Q-6 Answer the following in detail.** (14)
- a) Discuss Valence Bond Theory and its limitations (07)
 - b) Write a note on Zeroth Law and give mathematical equation law and its limitation. (07)

OR

- Q-6 Answer the following in detail.** (14)
- a) Discuss the Freundlich adsorption isotherms and its limitations (07)
 - b) What is Degree of hydrolysis? Derive the derivation for Hydrolysis constant (07)

*****5****14****S

