

C.U.SHAH UNIVERSITY

Wadhwan City

Subject Code : 4SC0CHC1

Summer Examination-2014

Date: 30/05/2014

Subject Name: Chemistry-II

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

Time:2:00 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 Compulsory question.**

1. Write down the structures of followings: 2
 - a) p-toluidine
 - b) p-amino phenol
 - c) Allyl alcohol
 - d) Diisopropyl ether
2. Explain HCP crystal structure 2
3. Give the conversion of Aniline to Acetanilide 1
4. Define terms 2
 - a) Isomerism
 - b) Coupling reaction

Q-2 Discuss the following questions

1. What is ionic solid? Gives the characterization of ionic solid. 5
2. Write a note on 4
 - a) Geometrical isomerism
 - b) Stereo isomerism
3. Answer the following questions: 5
 - a) Detailed industrial production of phenol by Dow process
 - b) Hoffmann Degradation of amides

OR**Q-2 Discuss the following questions**

1. Relative acidity of alcohols and phenols 4
2. Give the difference between 5
 - a) VBT and MOT
 - b) Bonding and Anti bonding
3. Explain the following name reactions: 5
 - a) Reimer Tiemann Reaction
 - b) Williamson synthesis

Q-3 Discuss the following questions

1. Explain the energy level diagram, magnetic properties and bond order of following molecules: 7
 - a) NO
 - b) F₂
 - c) Li₂
2. Answer the following question: 7
 - a) Physical properties of Amines.



b) What is diazotization? Explain Coupling reactions of diazonium salts

OR

Q-3 Discuss the following questions

1. Physical and chemical properties of alcohol 7
2. Physical and chemical properties of ether. 7

SECTION – II

Q-4 All questions are Compulsory 7

1. Define the following terms: 5
 - a) Anode
 - b) Photochemistry
 - c) Quantum Yield
 - d) EMF
 - e) Photosensitization
2. Role of salt bridge used in electrochemical cell. 1
3. Write full forms of TDS and TSS. 1

Q-5 Discuss the following questions

1. What is common ions effect and explain the common ion effect of NH_4Cl and NH_4OH ? 5
2. What do you mean by Lambert-Beers Law and derive the equation ? 5
3. Explain Galvanic cell with the neat and clean diagram 4

OR

Q-5 Discuss the following questions

1. Explain Nernst Equation and its application. 5
2. Write a note on followings: 5
 - a) Fluorescence
 - b) Chemiluminescence
3. Write notes on Acidity and basicity by titration 4

Q-6 Discuss the following questions

1. Define reference electrodes, Explain primary and secondary reference electrodes with neat and clean diagram. 7
2. Define Catalyst and explain types of catalyst in details. 7

OR

Q-6 Discuss the following questions

1. Define hardness. Explain method of titration for: 7
 - a) Complexometric method
 - b) Soap method
2. Write note on followings: 7
 - a) Flame test
 - b) Charcoal test
 - c) Borex Bead test
 - d) Cobalt nitrate test

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