

Code No. 8038

FACULTY OF PHARMACY**B. Pharmacy 2/4 I – Semester (Main) Examination, October / November 2014****Subject: Pharmaceutical Organic Chemistry - I****Time : 3 Hours****Max. Marks : 70****Note: Answer ALL questions. All questions carry equal marks.**

- 1 (a) Discuss the following with suitable examples. (4+4+6)
(i) Different types of covalent bonds. (ii) Polarity of molecules
(iii) Solubility
- OR**
- (b) (i) What is activation energy? Discuss the energy diagrams of reactants and products during the course of reaction.
(ii) Write a note on the following:
(A) Electromeric effect (B) Resonance (C) Molecular orbitals (8+6)
- 2 (a) (i) Explain peroxide effect or kharasch effect with examples. (4+7+3)
(ii) Write the general methods for preparation of alkynes.
(iii) Write a note on the acidity of 1-alkynes
- OR**
- (b) (i) Draw the conformations of cyclohexane and label axial and equatorial bonds. (4)
(ii) Discuss the importance of Bayer's strain theory. (7)
(iii) Explain electrophilic addition reactions of alkenes and dienes. (3)
- 3 (a) (i) Write any three methods to synthesize alkyl halides. (4+3+7)
(ii) How do you distinguish between primary, secondary and tertiary alcohols?
(iii) Discuss mechanism and stereochemistry of S_N1 reactions.
- OR**
- (b) Discuss the following : (6+4+4)
(i) Nucleophilic substitutions Vs Elimination (ii) Sayetzeff's rule
(iii) Properties and synthesis of ethers
- 4 (a) (i) Write any three methods to prepare carboxylic acids. (7+7)
(ii) Discuss the reactivity and synthetic applications of acetoacetic esters.
- OR**
- (b) (i) Discuss any three nucleophilic addition reactions of carbonyl compounds with mechanism. (7)
(ii) Write any three methods each to prepare aldehydes and ketones. (7)
- 5 (a) (i) Write any three methods to synthesize nitroalkanes. (7)
(ii) How do you differentiate primary, secondary and tertiary amines with chemical reactions? (7)
- OR**
- (b) (i) Give synthesis and applications of aryldiazonium salts. (6+4+4)
(ii) Explain Hinsberg's method of separation of amines.
(iii) Write the significance of Sandmeyer's reaction.
