FirstRankerbicomarmaceutical Organic Chemistry - I	
Max. Marks	s: 70 om
Note: Answer All questions. All questions carry equal marks.	
 1.(a) Discuss the following with suitable examples (4) (i) Polarity and dipole moment (ii) Hybridization (iii) Atomic and molecular orbitals (iv) Hydrogen bonding 	x3.5)
(b)(i) Explain the energy diagrams of reactants and products during the course	٥f
 (ii) Write a note on the following: (A) Resonance (B) Inductive and mesomieric effect 	(7) (7)
2.(a)(i) Explain Markonikov's and AntiMarkonikov's addition with examples. (ii) Explain the mechanism involved in the addition of HBr to 2-Butane accor to Markonikov's and antiMarkonikov's addition. OR	(7) rding (7)
 (b)(i) Write any four methods of preparation of alkenes. (ii) Discuss Bayer's strain theory. (iii) Discuss various conformations of cyclohexane and n-Butane giving their stability. 	(4) (3) (7)
3.(a)(i) Write any four methods to prepare n-propyl bromide. (ii) Discuss in detail the mechanism and stereo chemistry involved in SN ¹ SN ² reactions.	(4) ¹ and (10)
(b)(i) Explain the mechanism involved in dehydration of alcohols. (ii) How do you prepare ethers by Williamson's synthesis? (iii) List out the differences between Nucleophilic substitution Vs. Elimination	(7) (3) . (4)
4.(a)(i) Discuss any four nucleophilic addition reactions of carbonyl compounds	with
(ii) How do you synthesize Schiff bases? (iii) Write any three methods of preparation of aldehydes.	(7) (3) (4)
 (b)(i) Write in detail the acidity of carboxylic acids. (ii) Write any three methods to synthesize carboxylic acids. (iii) Discuss the reactivity and synthetic applications of Diethyl malonate and Ethylaceto acelate. 	(3) (3) (8)
5.(a)(i) Discuss basicity and important reactions of amines. (ii) Give the synthetic applications of aryl diazonium salts. (iii) Explain Hinsbergs method of separation of a mines. OR	(6) (4) (4)
(b)(i) Write a note on Sandmeyer's reaction. (ii) Write any three methods to prepare nitro alkanes. (iii) Write any four important reactions of amines.	(3) (5) (6)

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