GUJARAT TECHNOLOGICAL UNIVERSITY Pharm D – 1st Year • EXAMINATION – SUMMER - 2017

Subject Code: 818804 Date: 02/00				
Su Tii	Name: Pharmaceutical Organic Chemistry0.30 AM to 01.30 PMTotal Marks: 70			
Inst	truction 1. Att 2. Ma 3. Fig	ns: tempt any five questions. The suitable assumptions wherever necessary. gures to the right indicate full marks.		
Q.1	(a) (b) (c)	What do you mean by alicyclic compounds? Explain Baeyer strain theory in detail. Explain halogenations of alkanes with examples Explain the mechanism and reactions of crossed aldol condensation with examples	06 04 04	
Q.2	(a) (b) (c)	What are isomers? Describe the various types of isomers Explain the bimolecular displacement mechanism for nucleophilic aromatic substitution Describe assay and medicinal uses of aspirin	06 04 04	
Q.3	(a) (b) (c)	 Halogens are deactivating but ortho-para directing in aromatic electrophilic substitution of benzene. Explain in detail. Explain the lewis acid-base theory by giving examples Write structure and name of the product formed by oxidation of n butyl alcohol with following oxidizing agents (1) Pyridinium chloro chromate (2) Potassium permagenate 	06 04 04	
Q.4	(a) (b) (c)	Explain the addition of hydrogen bromide to alkene in presence of peroxide with mechanismDifferentiate between E_1 and E_2 mechanismWrite the structures for the following(1) Tert butyl alcohol(2) Dimethyl amine(3) Iso propyl chloride(4) o –Nitro Phenol	06 04 04	
Q.5	(a) (b) (c)	 Describe sandmeyer reaction with mechanism and examples Discuss the free radical substitution reaction in alkenes with examples Explain the following Why 1,3- pentadiene is more stable than 1,4- pentadiene Like dissolves like 	06 04 04	
Q. 6	(a) (b) (c)	 Discuss the factors which govern whether reaction will follow SN₁ or SN₂ mechanism Explain fridel crafts acylation of benzene with mechanism Explain the following Trifluoro acetic acid is more acidic than acetic acid Hydrogen fluoride has the large dipole moment of 1.75 D, while methane and carbon tetrachloride has near to zero dipole moment 	06 04 04	

0.7	(a)	Describe Hofmann rearrangement with mechanism	06
-	(b)	Discuss the mechanism, kinetics and stereochemistry of SN ₁ reaction	04
	(c)	Write the following conversions	04
		1. Phenol to salicylic acid	
		2. Benzaldehyde to cinnamic acid	