Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

M. Pharmacy Sem-I Examination January 2010

Subject code: 910101
Subject Name: Advanced Organic Chemistry-I

Date: 23 / 01 / 2010 **Time: 12.00 – 3.00 pm**

Instructions: **Total Marks: 80**

1. **Attempt any five questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	(a)	Draw different structural isomers of 2-methylbutylbromide. What will be the dehydrohalogenation product of this isomers ? Give reaction mechanism of each reaction.	**11**
	(b)	Write a note on Aromatic Nucleophilic substitution.	**05**
Q.2	(a)	What will be the implications of resonance and hyperconjugation on different physical and chemical properties of organic compound? Describe with suitable examples.	**11**
	(b)	Write a note on Pinacol rearrangement.	**05**
Q.3	(a)	Enumerate different different mechanism involved in ester hydrolysis. Write in detail about each with example.	**08**
	(b)	How will you convert benzene to *m*-aminophenol.	**04**
	(c)	Give chemical reaction involved in conversion of isopropyl alcohol to n-propanol.	**04**
Q.4	(a)	Which types of alkyl halide reacts faster with dilute or strong sodium hydroxide ? What will be the product form ? Describe the reaction mechanism involved in each reaction.	**11**
	(b)	Discuss in detail about various factors influencing the reactivity of molecule.	**05**
Q.5	(a)	What are Ylides? How sulphur and phosphorous ylides generated? Write in detail about its importance in organic synthesis.	**11**
	(b)	Write a note on different photochemical reactions with suitable examples.	**05**
Q. 6	(a)	Describe following with suitable examples i. Hoffman and saytzeff's rule of elimination. ii. Antimarkonikov's addition	**06**
	(b)	Enumerate different aromatic compounds having non-benzenoid structure. Prove their aromaticity.	**05**
	(c)	Write a note on influence of neighboring group on nucleophilic substitution.	**05**
Q.7	(a)	What is tautomerism ? Discuss in detail about keto-enol tautomerism with suitable example.	**06**
	(b)	Why rearrangement occur in organic reaction ? Write a note on Hoffman rearrangement.	**05**
	(c)	Write a note on i. Claisen condensation ii. E1cb reaction	**05**

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