Seat No.:	Enrolment No.
Scal IVI	Emoment no.

GUJARAT TECHNOLOGICAL UNIVERSITY B. PHARM. - SEMESTER - III • EXAMINATION - WINTER 2012

Date: 31/12/2012

Subject code: 230003

Subject Name: Pharmaceutical Chemistry - III Time: 10.30 am - 01.30 pm Total Marks: 80			
	1	ks: ðu	
ınsı	 Attempt any five questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks. 		
Q.1.	a. What are the different methods used to estimate nitrogen in organic compound? Discuss in		
	detail about the method involving evolution of nitrogen gas.	6	
	b. Write a note on molecular orbital theoryc. Explain: Antimarconikov addition, Antibonding orbital, Walden inversion	4 6	
Q.2.	a. Correct if necessary and explain with examplei. Sp3 hybridized C-C bonds are stronger than Sp2 hybridized.ii. Higher the polarity stronger the bond.iii. All cations are lewis acid.	10	
	iv. More the alkyl substituted carbanion more will be the stability.		
	v. Lower alcohols are imiscible in water.b. What are difference between resonance and hyperconjugation? What are their is on various properties of organic compound.	mplications 6	
Q.3.	 a. How carbocation and carbenes are generated? Discuss about their stability and reactivity with suitable example. b. Define conformation. Draw different conformations of n-butane. Discus about stability of 		
	each.	5	
	c. Write a note on halogenation of alkane.	4	
Q.4.	a. What are Chlorofluorocarbons (CFC)? They are members of green house gases		
	Why? b. What are geometrical isomers? Discuss about different methods used to define	6	
	configuration of geometrical isomer.	4	
	c. Give following conversions	6	
	i. 2-Bromobutane when reacted with alcoholic KOH.ii. 1-Propene when reacted with HBr in presence and absence of hydrogen peroxid iii. Give synthetic route for n-nonane from ethyl chloride.	e.	
Q.5.	a. Classify dienes. Which one is more stable ? Why?	4	
	b. What are different types of nucleophilic substitution reactions. Discuss about	each with	
	suitable example. c. Write a note on sigmatropic reactions.	8 4	
Q.6.	Write a note on following	4 x 4	
	a. Williamson Synthesisb. Grignard synthesis of alcoholc. Hydroboration-oxidation reactiond. Carius method of halogen estimation		
Q.7.	a. Which are the different types of elimination reactions? Discuss about each with example.	_	
	b. Give two methods for synthesis of alkyne, epoxides, alkyl halides and alkene.	8 8	
