

C.U.SHAH UNIVERSITY

Winter Examination-2015

Subject Name: Pharmaceutical Chemistry III (organic chemistry I)

Subject Code: 4PS02PCH3 Branch: B.Pharm

Semester: II Date: 19/11/2015 Time: 10.30 To 1.30 Marks: 70

Instructions:

- (1) Use of Programmable calculator & any other electronic instrument is prohibited.
- (2) Instructions written on main answer book are strictly to be obeyed.
- (3) Draw neat diagrams and figures (if necessary) at right places.
- (4) Assume suitable data if needed.

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- Q-1 Attempt the following questions: (14)**
- What is LCMO? 1
 - What is meant by VSEPR theory? 1
 - Pi bond is weaker than sigma bond, comment. 1
 - What is the hybridization and bond angle of NH_3 ? 1
 - Define hybridization. 1
 - What is hydrogen bond? 1
 - Write structure of 2,2-dimethylhex-3-yne. 1
 - Write the structure of 2-ethyl 3-methylhept-1,4-diene. 1
 - What is meant by co-ordinate covalent bond? 1
 - What is homolytic fission. 1
 - What is carbene? 1
 - Write the structure of 1,2-dimethyl cyclopentane.. 1
 - What is heterolytic fission. 1
 - What is meant by free radical. 1
- Attempt any four questions from Q-2 to Q-8**
- Q-2 Attempt all questions (14)**
- Describe the inductive effect and mesomeric effect. 7
 - Write a detailed note on sp^3 hybridization with suitable example. 7
- Q-3 Attempt all questions (14)**
- Describe carbocation and carbanion with suitable example and discuss their stability trend. 7
 - Describe the method of preparation of cyclo alkanes and discuss bayer's strain theory. 7



Q-4	Attempt all questions	(14)
a)	Write the method of preparation of alkane (any five) and their physical properties.	7
b)	Write the chemical reaction involved in alkenes.	7
Q-5	Attempt all questions	(14)
a)	Write the method of preparation of alkynes(any four) and their chemical reaction (any three)	7
b)	Write the method of preparation of alkyl halides.	7
Q-6	Attempt all questions	(14)
a)	How the primary, secondary and tertiary alcohols can be distinguished.write any four chemical reaction of alcohol.	7
b)	Write distinction and separation process of primary, secondary and tertiary amines.	7
Q-7	Attempt all questions	(14)
a)	Write the methods of preparation of alcohols. (any five) and their physical properties.	7
b)	Differentiate between SN^1 and SN^2 reaction with suitable example.	7
Q-8	Attempt all questions	(14)
a)	Write the method of preparation of ether and their chemical properties.	7
b)	Write the chemical reaction involved in amines.	7

