

End Semester Examinations - 2015-16 Even Semester - May 2016

14CH2006 Basic Organic Chemistry

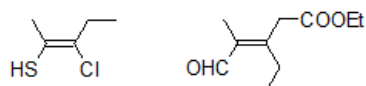
Set B

Time : 3 hrs
Total Marks: 100

1. Explain diastereoselective and enantioselective reactions with suitable examples.

OR

2. (i) Explain with a suitable example Field effect.
(5 marks)
- (ii) Write all the resonance structures of the following: methoxybenzene, nitrobenzene.
(10 marks)
- (iii) Write the structure of 4-chlorophenol and 3-carbethoxyheptan-2-ene.
(5 marks)
3. (i) Name any one of the symmetry elements in a molecule which prevent chirality in a compound.
(2 marks)
- (ii) What is meant by a mesomer? Give an example.
(2 marks)
- (iii) Define diastereomers with example.
(4 marks)
- (iv) Assign E, Z nomenclature to the following isomers.
(4 marks)



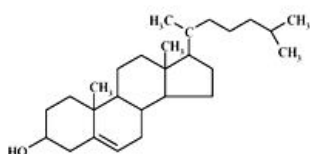
- (v) Explain elimination and rearrangement reactions with examples.
(8 marks)

OR

4. (i) Arrange the following carbocations in the increasing order of their stability.
(8 marks)



- (ii) Draw all the conformational structures of 1,4-dimethylcyclohexane along with their potential energy profile. Point out the most stable isomer.
(10 marks)
- (iii) Point out all the chiral centres in the following compound:
(2 marks)



5. (i) Draw the energy profile diagram of all the conformations of 1,2-dimethylcyclohexane. Explain which conformer is the most stable and why. (10 marks)

(ii) Write all the resonance structures of the following: methoxybenzene, nitrobenzene.
(10 marks)

OR

6. (i) Explain optical isomerism and cis – trans isomerism with suitable examples.
(10 marks)

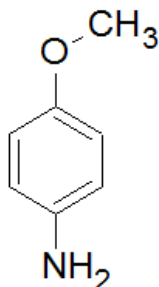
(ii) Draw all the conformers of 1,2-dibromoethane. Explain which conformer is the most stable and which one is the least stable.
(10 marks)

7. Give a detailed account of the effect of conformation on reactivity with examples.

OR

8. Explain the nomenclature of terpenoids. Give the general methods of determination of the structure of terpenoids.
(10 + 10 marks)

9. (i) Name the following compound:
(2 marks)



(ii) Write the structure of m-nitrobenzoic acid.
(2 marks)

(iii) Define addition reactions with examples.
(4 marks)

(iv) What is meant by hyperconjugation? Explain with suitable example.
(8 marks)

Wishing you All the Best
