B.Sc. (NEP) Semester-II

BSCCH601 Core - Chemistry-II - Basic Organic Chemistry

P. Pages : 2 **GUG/S/25/16768**

Time : Two Hours * 4 3 5 7 * Max. Marks : 40

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1. a) Define Hybridization. Explain the formation of Methane molecule on the basis of SP^3, Hybridization. **5**

b) Explain generation stability and reaction of carbocation. **5**

OR

c) Write about electrophiles and nucleophiles. **2½**

d) Explain elimination reaction. **2½**

e) What are carbanions? Give its formation. **2½**

f) What is Inductive effect? Explain with well suitable examples. **2½**

2. a) What is isomerism? Discuss classification with examples. **5**

b) Explain conformational analysis of Cyclohexane with the help of Boat form and Chair form structures. **5**

OR

c) Describe optical isomerism in tartaric acid. **2½**

d) Discuss CIP rules with suitable examples. **2½**

e) What are sequence rules? Explain with the help of any one example. **2½**

f) What is Walden Inversion? Explain with suitable examples. **2½**

3. a) What are Dienes? Give its classification with suitable examples. **5**

b) Discuss hydroboration and ozonolysis reactions. **5**

OR

c) State and explain Markownikoff's rule. **2½**

d) Explain – Freund's Reaction of synthesis of cycloalkane with suitable examples. **2½**

e) State and explain Saytzeff's Rule. **2½**

f) Explain Kolbe's reaction. **2½**

4. Answer **any ten** of the following twelve Short Question. **10x1**

1) What is mean by racemic mixture? **1**

2) What is chirality? **1**

3) Draw Newmann projection formula of ethane (eclipsed and staggard form). **1**

4) What is peroxide effect? **1**

5) Define Cetane Number? **1**

6) Write Wurtz reaction? **1**

7) What is bond length? **1**

8) Define bond angles. **1**

9) Define Rearrangement reaction. **1**

10) Define Isomerism. **1**

11) Give synthesis of Acetylene from CaC_2. **1**

12) Define electrometric effect with example. **1**

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