

B. Sc 2nd Semester (CBCS) Home Assignment

Subject: Chemistry (HC)

Paper: Organic Chemistry (CHE-HC-2016)

Last Date of Submission: 10/08/2020

Total Marks: 50

Question No 1: Answer the following questions

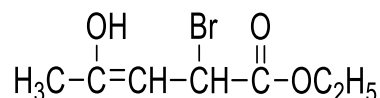
1X10=10

- What is the state of hybridization in singlet carbene?
- Define heterocyclic compound?
- What is the difference between an acyclic organic compound and alicyclic organic compound?
- Write the IUPAC name of $\text{CH}_3\text{CH}=\text{CH}(\text{CH}_3)-\text{C}=\text{CH}$
- Write the structural formulae of Pentanone-3.
- Write one condition for aromaticity.
- Name the reaction where benzene is converted to toluene.
- What is Lindlar's Catalyst?
- What is the difference between electrophilic substitution and electrophilic addition?
- What is the final product in Corey-House synthesis?

Question No 2: Answer the following questions

2X5=10

- Write the IUPAC name of the compound.

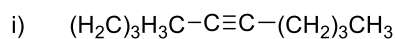


- Explain why allyl radical is more stable than alkyl radical?
- What do you mean by optical activity? What is dextrorotatory and laevorotatory?
- Name such catalyst which helps in the catalytic hydrogenation of alkenes and alkynes?
- What is Huckel's rule for aromaticity? Give example.

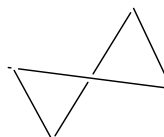
Question No 3: Answer the following questions

5X3=15

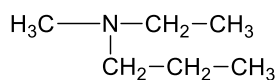
- Give the IUPAC name of



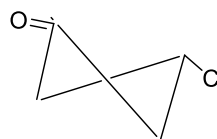
ii)



iii)



iv)



- b) How reactivity varies in SN^2 reaction, describe with energy diagram?
- c) What do you mean by non aromatic and anti aromatic explain with examples?

Question No 4: When a phenol is nitrated what would be the more preferable substitution reaction occurs and why? Explain. **5**

Question No 5: Define Inductive effect and Electromeric effect with examples. Show the resonance structure of phenol and phenoxide Ion. **2+3=5**

Question No 6: What is the importance of Markownikoff's rule? Explain Markownikoff and anti Markownikoff's rule with examples. **1+4=5**