

INTERNATIONAL INDIAN SCHOOL RIYADH

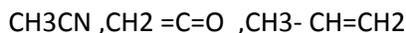
Grade11

WORKSHEET

Sub : Chemistry

Organic chemistry & Hydrocarbons

1. Mention the type of hybridization of each carbon in the compounds



2. In sulphur estimation 0.157 g of an organic compound gave 0.4813g of Barium sulphate .What is the percentage of sulphur in the compound ?



Identify A and B

4. Classify the following pairs as position ,chain ,functional isomers or metamers

i) Diethylamine and methylpropylamine ii) Ethanol and dimethylether.

5. Draw cis and trans isomers of hex-2-ene. Which isomer will have higher boiling point?

6. Identify electrophilic centre in the following CH_3CHO and CH_3CN

7. Name a suitable technique for the separation of calcium sulphate and camphor

8. Indicate the number of sigma and pi bonds in HCONHCH_3

9. Why is a solution of KOH used to absorb carbon dioxide evolved during the estimation of carbon present in an organic compound?

10. Describe the principles of distillation under reduced pressure and steam distillation

11. The following techniques are used to quantitatively estimate extra elements in organic compound. Identify the method and the element estimated by this method

i) A known mass of organic compound is heated with fuming HNO_3 in presence of AgNO_3

ii) Organic compound is heated with dry copper oxide in an atmosphere of CO_2

12. Give the condensed and bondline structural formula and identify the functional groups (if any)

i) 2,2,4-trimethylpentane ii) 2-Hydroxy -1,2,3-propane tricarboxylic acid iii) Cycloocta -1,5-diene

HYDROCARBONS

1. Convert I) Phenol to benzene II) Benzene to p-nitrotoluene iii) methylbromide to ethane.

iv) Benzene to acetophenone v) Ethanoic acid to methane

2. State Markovnikov rule. Using this rule write the reactions of propene with a) HBr b) H₂O

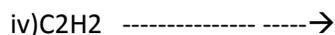
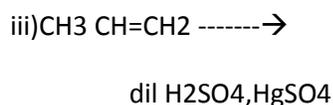
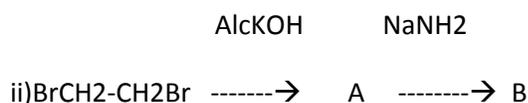
3. An unknown alkene A on reductive ozonolysis gives two isomeric carbonyl compounds B and C having molecular formula C₃H₆O. Write the structures of A, B, C

4. Give reason : a) Alkynes are acidic

b) Cis but-2-ene has higher dipole moment than trans but-2-ene

c) n-Pentane has higher boiling point than neopentane

5. Write structures of products



6. What happens when 2-Bromobutane is being treated with KOH (alc)?

7. Explain the reason for extra ordinary stability of benzene in spite of presence of three double bonds present in it.

8. Write IUPAC names of I) $\text{CH}_3\text{-CH}=\text{CH-COCH}_3$ (II) $\text{CH}_3\text{-CO-CO-CH}_3$ (III) $(\text{CH}_3)_2\text{CHCH}_2\text{CH}_3$

9. Propanal and pentan-3-one are the ozonolysis products of an alkene. What is the structural formula of the alkene?

10. How will you convert the following compounds to benzene?

(i) Ethane (ii) Ethene (iii) Hexane