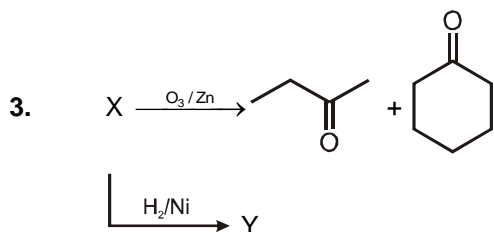


### DPP No. : 1

- Addition of HCl to 2-methyl-2-butene mainly gives
  - 1-Chloro-2-methylbutane
  - 2-Chloro-2-methylbutane
  - 2-Chlorobutane
  - 1-Chlorobutane.
- Kharasch effect regarding addition of HBr is not observed in :
  - hex-1-ene
  - prop-1-ene
  - hex-3-ene
  - pent-1-ene

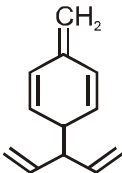


The IUPAC name of compound Y is :

- 2-Cyclohexyl butane
  - 1-Methyl propyl cyclohexane
  - Butyl cyclohexane
  - 1-Cyclohexyl butane
- An alkene give two moles of HCHO, one mole of CO<sub>2</sub> and one mole of  $\text{CH}_3 - \overset{\text{O}}{\parallel}{\text{C}} - \text{CHO}$  on ozonolysis.
 

What is its structure?

    - $\text{CH}_2 = \text{CH} - \underset{\text{CH}_3}{\text{CH}} - \text{CH} = \text{CH}_2$
    - $\text{CH}_2 = \text{C} = \text{CH} - \underset{\text{CH}_2}{\text{C}} - \text{CH}_3$
    - $\text{CH}_3 - \underset{\text{CH}_3}{\text{C}} = \text{CH} - \text{CH} = \text{CH}_2$
    - $\text{CH}_2 = \text{C} = \text{CH} - \underset{\text{CH}_3}{\text{CH}} - \text{CH} = \text{CH}_2$
- The characteristic reaction of benzene is :
    - Electrophilic addition
    - Nucleophilic substitution
    - Electrophilic substitution
    - Nucleophilic addition.

6. The decreasing order of reactivity towards electrophilic substitution reaction of the following compounds is :
- (i) benzene, (ii) chlorobenzene, (iii) nitrobenzene, (iv) toluene  
 (1) i > iii > iv > ii (2) iv > i > iii > ii (3) iv > i > ii > iii (4) iv > ii > i > iii
7. -NH<sub>2</sub> group in aniline is :
- (1) m-directing and deactivating (2) o, p-directing and deactivating  
 (3) o, p-directing and activating (4) m-directing and activating
8. An unknown carboxylic acid salt on Kolbe's electrolysis forms cyclobutane; the carboxylic acid can be:
- (1) adipic acid (2) hexanoic acid (3) succinic acid (4) fumaric acid
9. Number of moles of hydrogen required for complete hydrogenation of one mole of the following compound :
- 
- (1) 6 (2) 7 (3) 5 (4) 3
10. Only one isomeric monochloro derivatives are possible for :-
- (1) n-Pentane (2) 2,4-Dimethyl pentane  
 (3) Toluene (4) 2,3-Dimethyl butane

### Answer Key

1. (2) 2. (3) 3. (2) 4. (2) 5. (3) 6. (3) 7. (3)  
 8. (1) 9. (3) 10. (3)