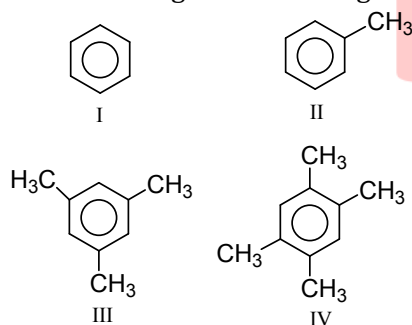


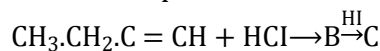
## Topic :-HYDROCARBONS

- Which of the following have delocalised electron?  
 a) Benzene                      b) Cyclohexane                      c) CH<sub>4</sub>                      d) C<sub>2</sub>H<sub>6</sub>
- The IUPAC name of CH<sub>2</sub> = CH—CH<sub>2</sub>—group is:  
 a) Allyl                      b) Propyl                      c) Prop-2-enyl                      d) Prop-1-enyl
- Which statement is correct?  
 a) Low chemical reactivity of alkanes is due to strong C—C and C—H bonds  
 b) Alkanes show characteristic substitution reactions because they are saturated  
 c) Reaction of alkanes with fluorine is explosive even in dark  
 d) All of the above
- Ease of sulphonation of alkanes is:  
 a) 3° > 2° > 1°                      b) 1° > 2° > 3°                      c) 2° > 3° > 1°                      d) 3° > 1° > 2°
- Arrange the following in order of decreasing boiling point



- a) I > II > III > IV    b) IV > III > II > I    c) I > III > IV > II    d) II > III > I > IV

6. The product *B* is:

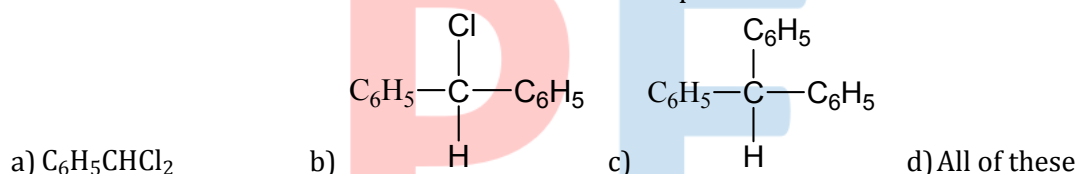


- a)  $\begin{array}{c} | \\ \text{CH}_3\text{CH}_2\text{CH}_2\text{C}-\text{H} \\ | \\ \text{Cl} \end{array}$                      
 b)  $\begin{array}{c} \text{I} \\ | \\ \text{CH}_3\text{CH}_2\text{CH}-\text{CH}_2 \\ | \\ \text{Cl} \end{array}$                      
 c) CH<sub>3</sub>CH<sub>2</sub>C≡CH                     
 d) CH<sub>3</sub>CH=CHCH<sub>3</sub>

7. *n*-propyl bromide on treating with alcoholic KOH produces  
 a) Propane                      b) Propene                      c) Propyne                      d) Propanol
8. An unsaturated hydrocarbon upon ozonolysis gives one mole each of formaldehyde, acetaldehyde and methylglyoxal(CH<sub>3</sub>COCHO). The structure of the hydrocarbon is  
 a) CH<sub>2</sub> = CH – CH<sub>2</sub> – CH = CH<sub>2</sub>                      b) CH<sub>2</sub> = CH – C(CH<sub>3</sub>) = CH – CH<sub>3</sub>  
 c) (CH<sub>3</sub>)<sub>2</sub>C = CH – CH<sub>3</sub>                      d) CH<sub>3</sub> – CH = C(CH<sub>3</sub>) – CH<sub>3</sub>
9. Fischer-Tropsch process is used in the manufacture of:  
 a) Synthetic petrol                      b) Ethanol                      c) Benzene                      d) Ethanoic acid
10. 2-methylpropene is isomeric with butane-1. They can be distinguished by:  
 a) Baeyer's reagent                      b) Ammoniacal AgNO<sub>3</sub>                      c) Br<sub>2</sub> solution                      d) O<sub>3</sub>, Zn/H<sub>2</sub>O
11. Acetylene reacts with 42% H<sub>2</sub>SO<sub>4</sub> containing 1% HgSO<sub>4</sub> to give:  
 a) C<sub>2</sub>H<sub>5</sub>HSO<sub>4</sub>                      b) CH<sub>3</sub>CHO                      c) HCHO                      d) CH<sub>2</sub> = CH<sub>2</sub>

12. The simplest alkyne is:  
 a) CH                      b) CH<sub>2</sub>                      c) C<sub>2</sub>H<sub>2</sub>                      d) C<sub>2</sub>H<sub>4</sub>

13. A Friedel-Crafts reaction of benzene with chloroform produces



14. An alkene, obtained by the dehydration of an alcohol (*A*), on ozonolysis gives two molecules of acetaldehyde for every molecule of alkene. The alcohol (*A*) is:

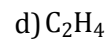
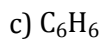
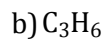
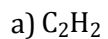


15. Which of the following annulenes is *anti*-aromatic?  
 a) Benzene                      b) Cyclobutadiene                      c) Cyclodecapentene                      d) Cyclooctatetraene

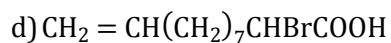
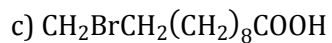
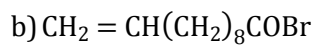
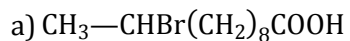
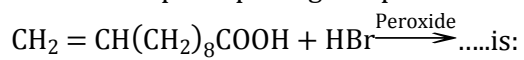
16. The number of possible isomers of alkane with formula C<sub>6</sub>H<sub>14</sub> is:  
 a) 2                      b) 3                      c) 4                      d) 5

17. Which statement is correct?  
 a) Alkanes from CH<sub>4</sub> to C<sub>4</sub>H<sub>10</sub> are colourless odourless gases  
 b) Alkanes from C<sub>5</sub>H<sub>12</sub> to C<sub>17</sub>H<sub>36</sub> are colourless liquids  
 c) All alkanes are lighter than water  
 d) Melting point of alkanes increases with increase in the number of carbon atoms

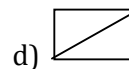
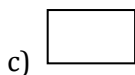
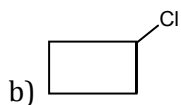
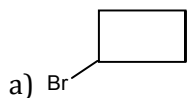
18. Which compound does not decolorize bromine dissolved in carbon tetrachloride?



19. The principal organic product formed in the reaction,



20. What would be the product formed when 1-bromo-3-chlorocyclobutane reacts with two equivalents of metallic sodium in ether?



PE