DPP
DAILY PRACTICE PROBLEMS

CLASS : XIIth **SUBJECT : CHEMISTRY**
DATE : **DPP NO. : 9**

Topic :-HYDROCARBONS

1. $[A] \xleftarrow[\text{catalyst}]{\text{Lindlar's}} CH_3 - C \equiv C - CH_3 \xrightarrow[\text{liq.}NH_3]{\text{Na in}} [B]$

$[A]$ and $[B]$ are respectively

a) *cis*, *trans*-2-butene
b) Both *trans*-2-butene
c) *trans*,*cis*-2-butene
d) Both *cis*-2-butene

2. Which of the following reacts with $KMnO_4$ but does not react with $AgNO_3$?

a) C_2H_6 b) CH_4 c) C_2H_4 d) C_2H_2

3. Octane number 116 is given for:

a) 2,2,2-trimethyl pentane
b) 2,3,4-trimethyl pentane
c) 2,2,3-trimethyl butane
d) 2,2,4-trimethyl butane

4. Which of the following statements is incorrect?

a) Acetylene is explosive above 2 atm
b) It is transported by dissolving in acetone
c) It has unpleasant garlic odour
d) It is used in the manufacture of Lewisite

5. Formation of ethylene from ethyl bromide is a case of:

a) Addition reaction
b) Substitution reaction
c) Elimination reaction
d) Rearrangement reaction

6. The most stable alkene is,

a) $R_2C = CR_2$ b) $RCH = CHR$ c) $CH_2 = CH_2$ d) $RCH = CR_2$

7. Ethylene can be prepared by electrolysis of an aqueous solution of:

a) Sodium acetate b) Sodium succinate c) Sodium fumarate d) Sodium propionate

8. HBr reacts with $CH_2 = CH - OCH_3$ under anhydrous conditions at room temperature to give

a) CH_3CHO and CH_3Br b) $BrCH_2CHO$ and CH_3OH

c) $BrCH_2 - CH_2 - OCH_3$ d) $H_3C - CHBr - OCH_3$

9. Identify Z in the following series?

$$CH_2 = CH_2 \xrightarrow{HBr} X \xrightarrow{\text{Hydrolysis}} Y \xrightarrow[I_2 \text{ excess}]{Na_2CO_3} Z$$

a) C_2H_5I b) CHI_3 c) CH_3CHO d) C_2H_5OH

10. Reactive species in halogenation of benzene in cold and dark

a) $Cl^{\bullet}$ b) Cl^+ c) Cl^- d) None of these

11. An organic alkadiene on reductive ozonolysis produces

(i)acetaldehyde

(ii)acetone

(iii)2-methylpropane-1, 3-dial

The formula of alkadiene will be

a) $CH_3C = CHCHCH = CHCH_3$ (with CH_3 and CH_3 branches)

b) $CH_3CHCH = CCH = CHCH_3$ (with CH_3 and CH_3 branches)

c) $CH_3C = CHCHC = CHCH_3$ (with CH_3 and CH_3 branches)

d) $CH_3CH_2CHCH = CHC = CH_2$ (with CH_3 and CH_3 branches)

12. Synthetic petrol and kerosene can be obtained by passing……under heat and pressure over coal.

a) O_2 b) H_2 c) N_2 d) CO_2

13. A hydrocarbon containing 2 carbon atoms give Sabatier and Senderen's reaction but does not give precipitate with ammoniacal silver nitrate solution. The hydrocarbon in question is:

a) Ethane b) Acetylene c) Ethylene d) None of these

14. Acetylene can be converted to higher alkyne using the following sequence of reactions:

a) Na, RX b) RMg X, R X c) Either of these two d) None of these

15. At low temperature, the slow addition of molecular bromine to $H_2C = CH—CH_2—C \equiv CH$ gives:
    a) $CH_2 = CH—CH_2—CBr = CHBr$
    b) $BrCH_2—CHBr—CH_2—C \equiv CH$
    c) $H_2C = CH—CH_2—CH_2—CBr_3$
    d) $CH_3—CBr_2—CH_2—C \equiv CH$

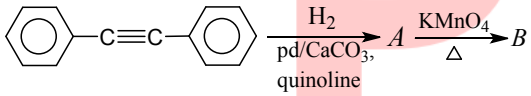
16. Which of the following statement is correct?
    a) Benzene has a tetrahedral geometry like an alkane
    b) Benzene is aromatic while naphthalene is not
    c) Benzene and Cyclohexane are both aromatic
    d) Benzene behaves more like and alkane than an alkene

17. $CaC_2 + H_2O \rightarrow A \xrightarrow{H_2SO_4/HgSO_4} B$

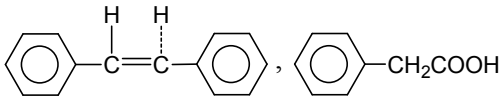
Identify *A* and *B* in the given reaction

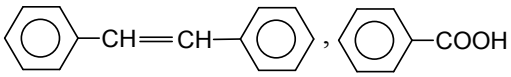
a) C_2H_2 and CH_3CHO b) CH_4 and HCOOH
c) C_2H_4 and CH_3COOH d) C_2H_2 and CH_3COOH

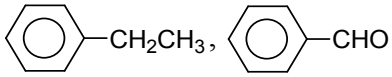
18. The correct boiling point order for corresponding hydrocarbons is:
    a) Alkyne>alkane>alkene
    b) Alkane>alkene>alkyne
    c) Alkyne>alkene>alkane
    d) Alkene>alkyne>alkane

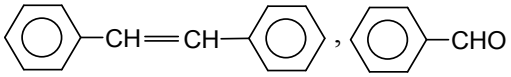
19. 

Identify A and B

a) 

b) 

c) 

d) 

20. Electrolysis of cold concentrated aqueous solution of potassium methyl succinate yields:
    a) Ethane b) Ethyne c) Propene d) Ethane-1,2-diol