

MAHESH PUBLIC SCHOOL  
JODHPUR  
SESSION 2020-21  
WORK SHEET-2 (ORGANIC CHEMISTRY)  
Halogen Containing Compounds

9. Which of the following organic compounds will give a mixture of 1-chlorobutane and 2-chlorobutane on chlorination
- (a)  $\text{CH}_3 - \underset{\text{CH}_3}{\underset{|}{\text{CH}}} - \text{CH} = \text{CH}_2$
- (b)  $\text{HC} \equiv \underset{\text{H}}{\underset{|}{\text{C}}} - \text{C} = \text{CH}_2$
- (c)  $\text{CH}_2 = \text{CH} - \text{CH} = \text{CH}_2$
- (d)  $\text{CH}_2 = \text{CH} - \text{CH}_2 - \text{CH}_3$
10. The chlorobenzene is generally obtained from a corresponding diazonium salt by reacting it with
- (a)  $\text{Cu}_2\text{Cl}_2$  (b)  $\text{CuSO}_4$
- (c)  $\text{Cu}$  (d)  $\text{Cu}(\text{NH}_3)_4^{2+}$
11. Decreasing order of reactivity of  $\text{HX}$  in the reaction  $\text{ROH} + \text{HX} \rightarrow \text{RX} + \text{H}_2\text{O}$
- (a)  $\text{HI} > \text{HBr} > \text{HCl} > \text{HF}$  (b)  $\text{HBr} > \text{HCl} > \text{HI} > \text{HF}$
- (c)  $\text{HCl} > \text{HBr} > \text{HI} > \text{HF}$  (d)  $\text{HF} > \text{HBr} > \text{HCl} > \text{HI}$
12. The product of the following reaction :  $\text{CH}_2 = \text{CH} - \text{CCl}_3 + \text{HBr}$
- (a)  $\text{CH}_3 - \text{CH}(\text{Br}) - \text{CCl}_3$  (b)  $\text{CH}_2(\text{Br}) - \text{CH}_2 - \text{CCl}_3$
- (c)  $\text{BrCH}_2 - \text{CHCl} - \text{CHCl}_2$  (d)  $\text{CH}_3 - \text{CH}_2 - \text{CCl}_3$
13. Chlorobenzene is prepared commercially by
- (a) Raschig process (b) Wurtz Fitting reaction
- (c) Friedel-Craft's reaction (d) Grignard reaction
14. In methyl alcohol solution, bromine reacts with ethylene to yield  $\text{BrCH}_2\text{CH}_2\text{OCH}_3$  in addition to 1, 2-dibromoethane because
- (a) The ion formed initially may react with  $\text{Br}^-$  or  $\text{CH}_3\text{OH}$
- (b) The methyl alcohol solvates the bromine
- (c) The reaction follows Markownikoff's rule
- (d) This is a free-radical mechanism
15.  $\text{C}_3\text{H}_8 + \text{Cl}_2 \xrightarrow{\text{Light}} \text{C}_3\text{H}_7\text{Cl} + \text{HCl}$  is an example of which of the following types of reactions
- (a) Substitution (b) Elimination
- (c) Addition (d) Rearrangement
16. Which of the following would be produced when acetylene reacts with  $\text{HCl}$
- (a)  $\text{CH}_3\text{CH}_2\text{Cl}$  (b)  $\text{CH}_3\text{CHCl}_2$
- (c)  $\text{CHCl} = \text{CHCl}$  (d)  $\text{CH}_2 = \text{CHCl}$
17.  $\text{R} - \text{OH} + \text{HX} \rightarrow \text{R} - \text{X} + \text{H}_2\text{O}$   
In the above reaction, the reactivity of different alcohols is
- (a) Tertiary > Secondary > Primary
- (b) Tertiary < Secondary < Primary
- (c) Tertiary < Secondary > Primary
18.  $\text{C}_6\text{H}_6 + \text{Cl}_2 \xrightarrow{\text{UV Light}}$  Product. In above reaction product is
- (a)  $\text{CCl}_3\text{CHO}$  (b)  $\text{C}_6\text{H}_6\text{Cl}_6$
- (c)  $\text{C}_6\text{H}_{12}\text{Cl}_6$  (d)  $\text{C}_6\text{H}_9\text{Cl}_2$
19. Benzene reacts with chlorine to form benzene hexachloride in presence of
- (a) Nickel (b)  $\text{AlCl}_3$
- (c) Bright sunlight (d) Zinc
20. The final product obtained by distilling ethyl alcohol with the excess of chlorine and  $\text{Ca}(\text{OH})_2$  is
- (a)  $\text{CH}_3\text{CHO}$  (b)  $\text{CCl}_3\text{CHO}$
- (c)  $\text{CHCl}_3$  (d)  $(\text{CH}_3)_2\text{O}$
21. When ethyl alcohol and  $\text{KI}$  reacted in presence of  $\text{Na}_2\text{CO}_3$ , yellow crystals of..... are formed
- (a)  $\text{CHI}_3$  (b)  $\text{CH}_3\text{I}$
- (c)  $\text{CH}_2\text{I}_2$  (d)  $\text{C}_2\text{H}_5\text{I}$
22. In preparation of  $\text{CHCl}_3$  from ethanol and bleaching powder, the latter provides
- (a)  $\text{Ca}(\text{OH})_2$  (b)  $\text{Cl}_2$
- (c) Both (a) and (b) (d) None of these
23. Which one of the following processes does not occur during formation of  $\text{CHCl}_3$  from  $\text{C}_2\text{H}_5\text{OH}$  and bleaching powder
- (a) Hydrolysis (b) Oxidation
- (c) Reduction (d) Chlorination
24. Which of the following is obtained when chloral is boiled with  $\text{NaOH}$
- (a)  $\text{CH}_3\text{Cl}$  (b)  $\text{CHCl}_3$
- (c)  $\text{CCl}_4$  (d) None of these
25. Chloroform can be obtained from
- (a) Methanol (b) Methanal
- (c) Propanol-1 (d) Propanol-2
26. Chlorine reacts with ethanol to give [MP PMT 1989; CPMT 1997; KCET 1998; JIPMER 1999]
- (a) Ethyl chloride (b) Chloroform
- (c) Acetaldehyde (d) Chloral
27. On heating diethyl ether with conc.  $\text{HI}$ , 2 moles of which of the following is formed
- (a) Ethanol (b) Iodoform
- (c) Ethyl iodide (d) Methyl iodide
28. Lucas reagent is
- (a) Concentrated (b) Dilute
- (c) Concentrated  $\text{HNO}_3$  + anhydrous  $\text{ZnCl}_2$
- (d) Concentrated  $\text{HCl}$  + anhydrous  $\text{MgCl}_2$
29. Which compound does not form iodoform with alkali and iodine
- (a) Acetone (b) Ethanol
- (c) Diethyl ketone (d) Isopropyl alcohol