

JEE CHEMISTRY

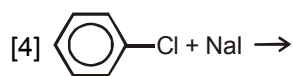
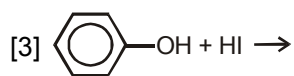
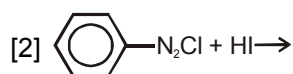
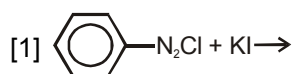
Topic : Aromatic compound

- Q.1** An organic compound contains about 7.7% carbon. Its acidic sodium extract gives a white precipitate with AgNO_3 . This precipitate is soluble in the excess of ammonia. The compound is
 [1] CHCl_3 [2] CHBr_3 [3] CHI_3 [4] CCl_4
- Q.2** Match the following and pick up the correct answer
- | | Compound | Use |
|---|--------------------------|------------------------|
| A | CHCl_3 | (i) Refrigerant |
| B | CCl_4 | (ii) Fire extinguisher |
| C | CF_2Cl_2 | (iii) Anaesthetic |
- The correct answer is
 [1] A–(i), B–(ii), C–(iii) [2] A–(iii), B–(ii), C–(i) [3] A–(iii), B–(i), C–(ii) [4] None of the above
- Q.3** Ethylidene bromide can be prepared by the following reaction
 [1] Acetone with PBr_3 [2] Acetone with PBr_5 [3] Ethene with HBr [4] Ethyne with HBr
- Q.4** A compound (A) is formed by the reaction of ethylene with bromine which on reacting with aqueous KOH gives a compound (B). The compound (B) can also be prepared by the reaction of ethylene with the following
 [1] Baeyer's reagent
 [2] Oxygen in the presence of silver catalyst and then acidic hydrolysis
 [3] performic acid and the product undergoes acidic hydrolysis
 [4] All of the above
- Q.5** The product of the reaction of methyl magnesium bromide with methanol can also be prepared by the following reaction
 [1] Reduction of methyl bromide [2] Decarboxylation of sodium ethanoate
 [3] Reduction of methyl alcohol [4] All of the above
- Q.6** The product of the reaction of sodium acetylide with alkyl halide is
 [1] A terminal alkyne [2] A terminal alkene [3] A non terminal alkyne [4] [1] and [3] both
- Q.7** Carbon tetrachloride can be prepared by the following reaction
 [1] CS_2 with Cl_2 in the presence of I_2 [2] CS_2 with S_2Cl_2 in the presence of I_2
 [3] CHCl_3 with Cl_2 in the presence of I_2 [4] All of the above
- Q.8** The adduct of which of the following compounds with Grignard's reagent does not form a primary alcohol on hydrolysis
 [1] O_2 [2] Oxirane [3] Methanal [4] Ethanal
- Q.9** For the preparation of α -butylene from methyl magnesium chloride, it will be reacted with
 [1] Propene [2] Propyl chloride [3] 3-Chloro propene [4] 2-Chloro propene
- Q.10** The vapour density of an organic compound is 23.0. It contains 52.17% C and 13% H. It gives iodoform test. The compound is
 [1] Ethanol [2] dimethyl ether [3] Acetone [4] Methanol
- Q.11** Identify Z in the following reaction
- $$\text{CH}_3\text{CN} \xrightarrow{\text{Na}/\text{C}_2\text{H}_5\text{OH}} \text{X} \xrightarrow{\text{HNO}_2} \text{Y} \xrightarrow{\text{KMnO}_4, \text{H}^+} \text{Z}$$
- [1] CH_3CHO [2] CH_3CONH_2 [3] CH_3COOH [4] $\text{CH}_3\text{CH}_2\text{NHOH}$

- Q.12** Which of the following is a correct statement
 [1] C_2H_5Br reacts with alcoholic KOH to give C_2H_5OH
 [2] Reaction of C_2H_5Br with metallic Na gives ethane
 [3] C_2H_5Br reacts with sodium ethoxide to give ether
 [4] C_2H_5Br reacts with AgCN to give ethyl cyanide
- Q.13** The product of the reaction of chloromethane with sodium sulphide is
 [1] Dimethyl sulphide [2] Methan thiol
 [3] Mixture of both the above [4] None of the above
- Q.14** The compound with highest boiling point is -
 [1] Ethylene bromide [2] Ethylene chloride [3] Ethylidene bromide [4] Ethylidene chloride
- Q.15** The main product obtained by the electrolysis of the aqueous ethanolic solution of potassium bromide and sodium carbonate, is
 [1] Ethyl bromide [2] Bromoform [3] Ethylene bromide [4] Ethylidene bromide
- Q.16** Which of the following is Swart's reaction
 [1] $C_2H_5Cl + AgF \xrightarrow{\Delta} C_2H_5F + AgCl$ [2] $2C_2H_5Br + 2Zn \rightarrow (C_2H_5)_2Zn + ZnBr_2$
 [3] $2CHCl_3 + 6Ag \rightarrow CH \equiv CH + 6AgCl$ [4] $C_2H_5Br + NaI \rightarrow C_2H_5I + NaBr$
- Q.17** The chloroform exposed to air and sunlight gives white precipitate with $AgNO_3$ solution because it contains
 [1] Phosgene [2] Hydrogen chloride [3] Chlorine [4] Mixture of all the above
- Q.18** The following type of compounds are obtained by the reaction of a carboxylic acid with lead tetra acetate and lithium chloride in benzene
 [1] Alkyl halides [2] Acid chlorides [3] $CO_2 + H_2O$ [4] None of the above

HALOBENZENE

- Q.19** Which of the following reactions is more suitable than the remaining three for obtaining iodobenzene ?



- Q.20** The reaction of chlorobenzene with which of the following reagents is not an example of electrophilic substitution reaction ?
 [1] $Cl_2 + Fe$ powder [2] Conc. H_2SO_4
 [3] Conc. $HNO_3 +$ Conc. H_2SO_4 [4] $CCl_3CHO +$ Conc. H_2SO_4
- Q.21** At the time of preparation of chlorobenzene from benzene, which of the following can be used as a halogen carrier ?
 [1] A Lewis acid [2] Elements like iron, iodine etc
 [3] A tertiary amine base [4] All of the above
- Q.22** Which of the following can be obtained by Balz-Schiemann reaction ?
 [1] Fluorobenzene [2] Chlorobenzene [3] Bromobenzene [4] Iodobenzene

- Q.23** Which of the following reactions can be used to obtain chlorobenzene from benzenediazonium chloride ?
 [A] Sandmeyer reaction [2] Balz–Schemann reaction
 [C] Rashing process [4] Gattermann reaction
 [1] A and B [2] A, B and C [3] A, C and D [4] C and D
- Q.24** Which of the following catalysts is used in the preparation of chlorobenzene by Gattermann reaction ?
 [1] CuSO_4 [2] CuCl_2 [3] Cu_2Cl_2 [4] Cu
- Q.25** Which of the following catalysts is used in the preparation of chlorobenzene by Sandmeyer's reaction ?
 [1] CuCl_2 [2] Cu_2Cl_2 [3] CuSO_4 [4] Cu
- Q.26** Which of the following compounds is obtained by Borodine–Hunsdiecker reaction of silver benzoate ?
 [1] Fluorobenzene [2] Chlorobenzene [3] Bromobenzene [4] Iodobenzene
- Q.27** Which of the following reagents is used for obtaining chlorobenzene from p–chlorophenol ?
 [1] Zinc dust [2] Soda lime [3] Sodamide [4] Copper powder
- Q.28** All of the following properties are exhibited by chlorobenzene, except :
 [1] Almond-like faint smell [2] Volatility
 [3] Inflammability [4] Nonpoisonous nature
- Q.29** In Dow process, chlorobenzene is reacted with which of the following reagents ?
 [A] $\text{O}_2 + \text{HCl}$ [B] NaOH [C] H_2O [4] Na_2CO_3
 [1] A and C [2] A and D [3] B and C [4] B and D
- Q.30** Condensation of chlorobenzene and chloral hydrate is carried out in the presence of concentrated sulphuric acid for obtaining ?
 [1] D.D.T. [2] Chloropicrin [3] B.H.C [4] Dichlorodiphenylethane

Answer Key

Qus.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Ans.	4	2	4	4	4	1	4	4	3	1	3	3	1	1	2	1	2	1	1	4
Qus.	21	22	23	24	25	26	27	28	29	30										
Ans.	4	1	3	4	2	3	1	4	4	1										