




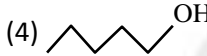
NEET CHEMISTRY

Topic: Oxygen containing substances.

Q.1 Which of the following isomeric alcohols have highest boiling point -

- (1) Primary (2) Secondary
 (3) Tertiary (4) All equal

Q.2 Least soluble alcohol in water is :

- (1)  (2) 
 (3)  (4) 

Q.3 Hydrogen bonding is possible in-

- (1) Ethers (2) Hydrocarbons
 (3) Alkanes (4) Alcohols

Q.4 The increasing order of boiling points of 1^o, 2^o, 3^o alcohol is -

- (1) 1^o > 2^o > 3^o (2) 3^o > 2^o > 1^o
 (3) 2^o > 1^o > 3^o (4) None

Q.5 The solubility of lower alcohols in water is due to -

- (1) Formation of hydrogen bond between alcohol and water molecules
 (2) Hydrophobic nature of alcohol
 (3) Increases in boiling points
 (4) None of these

Q.6 Match List-I with List-II and then select the correct answer from the codes given below the lists-

List-I

- (A) $\text{CH}_3\text{MgI} + \text{CH}_3\text{CHO} \rightarrow \text{Aduct} \xrightarrow{\text{H}_3\text{O}^{\oplus}}$
 (B) $(\text{CH}_3)_2\text{C} = \text{CH}_2 \text{ dil. } \xrightarrow{\text{dil. H}_2\text{SO}_4}$
 (C) $\text{CH}_3\text{COOC}_2\text{H}_5 \xrightarrow[\text{reduction}]{\text{Na} + \text{EtOH}}$

(D) $\text{CH}_3\text{CHOHC}_2\text{H}_5$

List-II

- (a) Shows optical isomerism
- (b) A secondary alcohol giving iodoform test
- (c) Product is a tertiary alcohol
- (d) Product is primary alcohol

(1) Ab, Bd, Cc, Da (2) Ab, Bc, Cd, Da

(3) Ab, Bc, Ca, Dd (4) Ab, Ba, Cd, Dc

Q.7 The alkaline hydrolysis of esters is known as:

- (1) Hydration (2) Esterification
- (3) Dehydration (4) Saponification

Q.8 Which of the following reactions of an alcohol does not involve O–H bond breaking :

- (1) Reaction with alkali metals
- (2) Reaction with an acyl chloride
- (3) Reaction with sulphonyl chloride
- (4) Reaction with conc. sulphuric acid.

Q.9 Separation of proton is difficult in-

- (1) MeOH (2) MeCH_2OH
- (3) $(\text{Me})_3\text{COH}$ (4) $(\text{Me})_2\text{CHOH}$

Q.10 Alkyl chloride is formed when alcohol is treated with HCl in presence of anhydrous ZnCl_2 . The order of reactivity with respect to alcohol is :

- (1) $3^\circ > 2^\circ > 1^\circ$ (2) $1^\circ > 2^\circ > 3^\circ$
- (3) $2^\circ > 1^\circ > 3^\circ$ (4) $1^\circ > 3^\circ > 2^\circ$

Q.11 An organic compound dissolved in dry benzene, evolved hydrogen on treatment with sodium. It is-

- (1) A ketone (2) An aldehyde
- (3) A tertiary amine (4) An alcohol

Q.12 When ethyl alcohol reacts with acetic acid, the products formed are-

- (1) Sodium ethoxide + hydrogen
- (2) Ethyl acetate + water
- (3) Ethyl acetate + soap
- (4) Ethyl alcohol + water

Q.13 Methyl alcohol reacts with phosphorus trichloride to form-

- (1) Methane (2) Methyl chloride
- (3) Acetyl chloride (4) Dimethyl ether

Q.14 The -OH group of methyl alcohol cannot be replaced by chlorine by the action of-

- (1) Chlorine
- (2) Hydrogen chloride
- (3) Phosphorus trichloride
- (4) Phosphorus pentachloride

Q.15 $R-OH + SOCl_2 \xrightarrow{\text{Pyridine}} R-Cl + SO_2 + HCl$ Pyridine in the above reaction -

- (1) Catalyses the reaction
- (2) Used to dissolve alkyl chloride
- (3) To remove excess of $SOCl_2$
- (4) None of the above

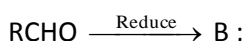
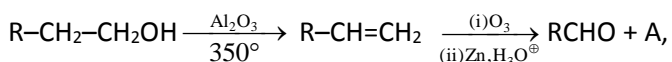
Q.16 Reaction of alcohol does not show cleavage of R-O linkage-

- (1) $ROH + PCl_5$ (2) $ROH + SOCl_2$
- (3) $ROH + HCl$ (4) $ROH + Na$

Q.17 Replacement of -OH group in alcohol by -Cl cannot be carried out with-

- (1) PCl_5 (2) SO_2Cl_2
- (3) PCl_3 (4) $SOCl_2$

Q.18 The missing structures A and B in the reaction sequence :



A & B are given by the set -

- (1) $CH_3OH, RCOOH$ (2) Methanal, RCH_2OH
- (3) Ethanal, $RCOOH$ (4) Methanal, $RCHOHR$

- Q.19** Next higher homologue of phenol is –
- (1) Hydroxy toluene
 - (2) Hydroxy benzene
 - (3) Dihydroxy benzene
 - (4) None of the above
- Q.20** Which of the following is not a phenolic compound –
- (1) Salol
 - (2) *o*-Cresol
 - (3) Anisole
 - (4) Quinol
- Q.21** Unacceptable name for a compound containing one -OH group attached to benzene nucleus would be-
- (1) Carboic acid
 - (2) Hydroxybenzene
 - (3) Catechol
 - (4) Phenol
- Q.22** How many π electrons are there in a planar ring of phenol –
- (1) 4
 - (2) 6
 - (3) 8
 - (4) 10
- Q.23** Which of the following is not a correct statement
- (1) Phenol is a much weaker acid than benzoic acid
 - (2) The reaction of ferric chloride with phenol to give violet colour is characteristic of $\begin{array}{c} \text{-C=C- Group} \\ | \\ \text{OH} \end{array}$
 - (3) Phenol is a stronger acid than ethanol but weaker than benzyl alcohol
 - (4) Picric acid does not contain a -COOH group.
- Q.24** Which of the following is a correct statement-
- (1) Phenol is more acidic than ethanol
 - (2) Phenol is less acidic than ethanol
 - (3) Phenol reacts with NaHCO_3
 - (4) Phenol reacts with NH_2OH and HCl to form oxime
- Q.25** Which of the following is a false statement -
- (1) Diethyl ether gives ethyl iodide on reacting with HI
 - (2) Diethyl ether and methyl isopropyl ether are chain isomers
 - (3) Diethyl ether is a Lewis base
 - (4) Diethyl ether on hydrolyses to ethanol by $\text{dil.H}_2\text{SO}_4$

Q.26 Mark the correct statement -

- (1) Ethers behave as Lewis base
- (2) Ethers form coordinated complexes with Lewis acids
- (3) With cold HI diethyl ether gives ethyl alcohol & ethyl iodide
- (4) All are correct

Q.27 Ethers are quite stable towards -

- (1) Oxidising agents (2) Bases
- (3) Na metal (4) All the above

Q.28 Ether is used as -

- (1) An antiseptic and a solvent
- (2) An anaesthetic and a solvent
- (3) A fire extinguisher under the trade name pyrene
- (4) A dry cleaning solvent

Q.29 In which case the product is neither a cyclic ether nor open chain symmetrical ether-

- (1) $\text{CH}_3-\text{CH}=\text{CH}-\text{CH}_3 \xrightarrow{\text{C}_6\text{H}_5\text{CO}_3\text{H}}$
- (2) $\text{CH}_3\text{CH}_2\text{ONa} + \text{C}_2\text{H}_5\text{Br} \longrightarrow$
- (3) $\text{KCN} + (\text{CH}_3)_3\text{CBr} \longrightarrow$
- (4) $\text{C}_2\text{H}_5\text{OH} (\text{Excess}) + \text{H}_2\text{SO}_4 \xrightarrow{140^\circ}$

Q.30 Compound used for preserving dead bodies is -

- (1) CH_2O (40%) (2) CH_3CHO (10%)
- (3) CH_3OH (25%) (4) $\text{C}_2\text{H}_5\text{OH}$ (40%)

ANSWER KEY

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