CHAPTER - ALCOHOL,PHENOL AND ETHERS
(ONE MARK MCQ TYPE QUESTIONS)

1. Dehydration of alcohols give ethers is catalysed by:
   (a) Conc. H_2SO_4 at 413 K (*c*) conc. H_2SO_4 at 383K
   (b) Conc. H_2SO_4 at 443 K (*d*) None of these
2. Dehydration of tertiary alcohols with Cu at 573K gives
   (a) Aldehydes (*b*) ketones (*c*) alkenes (*d*) None of these
3. Williamson's Synthesis is an example of:
   (a) Nucleophilic substitution reaction (c) Electrophilic substitution
   (b) Nucleophilic addition (d) None of these
4. Commercial alcohol is made unfit for drinking by adding
   (a) methyl alcohol (c) morphine and adipic acid
   (b) Nucleophilic addition (d) Snake poison
5. Phenol on distillation with Zinc dust give
   (a) Benzene (b) benzaldehyde (c) benzoic acid (*d*) benzophenone
6. Power alcohol is a mixture of
   (a) 80% petrol + 20%benzene + small quantity of ethanol
   (b) 80% petrol + 20%ethanol + small quantity of benzene
   (c) 80% ethanol + 20% benzene + small quantity of petrol
   (d) 50% petrol + 50% Ethanol + small quantity of benzene
7. Phenols are more acidic than alcohols because
   (a) Phenoxide ion is stablised by resonance
   (b) Phenols are more soluble in polar solvents
   (c) Phenoxide ion does not exhibit resonance
   (d) Alcohols do not lose H atoms at all
8. Which of the following reagents cannot be used to distinguish between phenol and benzyl alcohol?
   (a) $FeCl_3$ (*b*) Litmus solution (*c*) Br_2/CCl_4 (*d*) All of these

9. The correct order of boiling point of primary (1°) , secondary (2°) and tertiary (3°) alcohols is

(a) 1° > 2° > 3° (*b*) 3° > 2° > 1° (*c*) 2° > 1° > 3° (*d*) 2° > 3° > 1°

10. Which compound is predominantly formed when phenol is allowed to react with brominein aqueous medium?

(a) Picric acid (*b*) O-Bromophenol (*c*) 2, 4, 6-Tribromophenol (*d*) p-Bromophenol

11. Salicylaldehyde can be prepared from Phenol by

(a) Schotten-Baumann reaction (c) Reimer-Tiemann reaction

(b) Kolbe's reaction (d) Perkin reaction

12. The total number of acyclic Structural isomers possible for compound with molecular $C_4 H_{10} O$ is

(a) 9 (b) 7 (c) 5 (d) 6

13. Williamson's Synthesis of preparing dimethyl ether is a/an

(a) electrophilic substitiution (c) electrophilic addition

(b) $S_N 1$ reaction (d) $S_N 2$ reaction

14. Which of the following alcohols on dehydration with conc. H_2SO_4 give but -2-ene

(a) 2-methyl propan-2-ol (c) 2-methyl propan-1-ol

(b) Butan-1,2-diol (d) Butan-2-ol

15. Which of the following alcohols gives iodoform test?

(a) Butan-1-ol (b) Propan-1-ol (c) propan-2-ol (d) pentan-3-ol

16. Ethanol on warming with conc. H_2SO_4 at 413 K gives

(a) Ethane (b) diethyl ether (c) dimethyl ether (d) ethyl Hydrogen sulphate

17. Phenol reacts with bromine water in CS_2 at low temperature to give

(a) o-Bromophenol (c) p- Bromophenol

(b) (b) o-and p-Bromophenol (d) 2,4, 6-Tribromopheonl

18. Reimer-Tiemann reaction is useful for the preparation of;

(a) Benzaldehyde (b) salicylaldehyde (c) toluene (d) benzophenone

19. Phenol on distillation with Zinc dust give

(a) benzene (b) benzaldehyde (c) benzoic acid (d) benzophenone

20. Williamson's Synthesis is an example of:

(a) Nucleophilic substitution reaction (c) Electrophilic substitution

(b) Nucleophilic addition (d) None of these

21. Commercial alcohol is made unfit for drinking by adding

(a) methyl alcohol (c) morphine and adipic acid

(b) Antimony oxide and acetic acid (d) Snake poison

22. Molecular formula of ethers is:

(a) $C_n H_{2n+2}OH$ (b) $C_n H_{2n+2}O$ (c) $C_nH_{2n+1}O$ (d) None of these

Answers

1. (*a*) **2.** (*c*) **3.** (*a*) **4.** (*a*) **5.** (*a*)

6. (*b*) **7.** (*a*) **8.** (*a*) **9.** (*a*) **10.** (*c*)

11. (*c*) **12.** (*b*) **13.** (*d*) **14.** (*d*) **15.** (*c*)

16. (*b*) **17.** (*b*) **18.** (*b*) **19.** (*a*) **20.** (*a*)

21.(a) 22.(b)

(TWO MARKS QUESTIONS)

1. Why do alcohols has higher boiling point than haloalkanes of similar molecular mass ?
2. Alcohols are comparatively more soluble in water than hydrocarbons of comparable molecular masses. Explain this fact.
3. Write two uses of Methanol ?
4. Write two uses of Ethanol ?
5. How does phenol react with (*i*) Sodium (II) WATER
6. Why are ether relatively inert compound ?
7. The boiling point of ether are lower than their corresponding isomeric alcohols. Explain.
8. What is the catalyst dehydrogenation of alcohol
9. How alcohol react with

   (*i*) Carboxylic acid (*ii*) Acid anhydride
10. Explain why alcohols are weaker acid than water.
11. Solubility of alcohols in water decreases with increase in molecular mass. Discuss
12. Why primary alcohols are more acidic than secondary alcohols ?
13. Write short note on coupling reaction
14. Write the uses of ether
15. Why are ether relatively inert compound ?
16. Ethers possess a dipole moment even if the alkyl radicals in the molecule are identical. Explain

(THREE MARKS QUESTIONS)

1. Why is the Boiling point of ether lower than the isomeric alcohols ?
2. Why is C – O – C bond angle in ether is more than H – O – H bond angle in water though oxygen atom is sp^3 hybridised in both the cases ?
3. Write short note on coupling reaction.
4. Discuss the oxidation of alcohols
5. Discuss the reaction and mechanisms of Acidic Dehydration of ethyl alcohol to prepare ether.

6. How can you distinguish primary, secondary and tertiary alcohols by Lucas test ?
7. What happens when 1°, 2° and 3° alcohols are passed over red hot copper ?
8. Discuss the acidic dehydration of alcohol at different temperature.
9. Write Victor Meyer's test to distinguish between 1°, 2° and 3° alcohols
10. Discuss the reaction and mechanisms of Acidic Dehydration of ethyl alcohol to prepare ether.
11. Phenol are acidic in nature. Explain.
12. Phenol has higher boiling point the toluene. Why ?
13. Dimethyl ether is completely soluble in water but diethyl ether is soluble in water to a smaller extent. Explain.
14. Why did tert-butyl ether cannot be prepared by Williamson synthesis