

## Alcohols, Phenols and Ethers

1. Which of the following cannot be made by using Williamson's synthesis process?

- (a) Methoxy benzene
- (b) tert-butyl ethyl ether
- (c) allyl methyl ether
- (d) Di-tert-butyl ether

**Answer: (d) Di-tert-butyl ether**

2. Amongst the following alcohols which would react fastest with conc. HCl and  $\text{ZnCl}_2$  ?

- (a) pentan-1-ol
- (b) 2-methyl butan-1-ol
- (c) pentan-2-ol
- (d) 2-methyl butan-2-ol

**Answer: (d) 2-methyl butan-2-ol**

3. Heating of phenyl methyl ether with HI produces:

- (a) Iodobenzene
- (b) phenol
- (c) benzene d
- (d) ethyl chloride

**Answer: (b) phenol**

4. The alcohol which is also known as wood spirit is:

- (a) Methanol
- (b) Ethanol
- (c) Propanol
- (d) Butanol

**Answer: (a) Methanol**

5. Find out correct order of acidic strength among the following

- (a) Ethanol > Water > Phenol
- (b) Ethanol < Water < Phenol
- (c) Water < Ethanol < Phenol
- (d) Phenol > ethanol = Water

**Answer: (b) Ethanol < Water < Phenol**

6. Which of the following will not be soluble in  $\text{NaHCO}_3$ ?

- (a) 2,4,6 trinitrophenol
- (b) Benzoic acid
- (c) o- Nitrophenol
- (d) Benzene sulphonic acid

**Answer: (b) Benzoic acid**

7. Which of the following reagents may be used to distinguish between phenol and benzoic acid ?

- (a) Neutral  $\text{FeCl}_3$
- (b) Aqueous  $\text{NaOH}$
- (c) Tollen's reagent
- (d) Molisch reagent

**Answer: (a) Neutral  $\text{FeCl}_3$**

8. The product formed in the following reaction will be:

- (a) Benzaldehyde
- (b) Benzene
- (c) Benzoquinone
- (d) Benzoic acid

**Answer: (c) Benzoquinone**

9. Which of the following has lowest boiling point?

- (a) p-Nitrophenol
- (b) m-Nitrophenol
- (c) o-Nitrophenol
- (d) Phenol

**Answer: (c) o-Nitrophenol**

10. Rate of dehydration of alcohols follows the order:

- (a)  $2^\circ > 1^\circ > \text{CH}_3\text{OH} > 3^\circ$
- (b)  $3^\circ > 2^\circ > 1^\circ > \text{CH}_3\text{OH}$
- (c)  $2^\circ > 3^\circ > 1^\circ > \text{CH}_3\text{OH}$
- (d)  $\text{CH}_3\text{OH} > 1^\circ > 2^\circ > 3^\circ$

**Answer: (b)  $3^\circ > 2^\circ > 1^\circ > \text{CH}_3\text{OH}$**

11. Phenol on heating with  $\text{CHCl}_3$  and  $\text{NaOH}$  gives salicylaldehyde. The reaction is called :

- (a) Reimer-Tiemann reaction
- (b) Gatterman-Koch reaction
- (c) Cannizzaro's reaction
- (d) Hell-Volhard-Zelinsky reaction

**Answer: (a) Reimer-Tiemann reaction**

12. Which of the following is a secondary alcohol?

- (a) 2-methylbutan-2-ol
- (b) 3-methylbutan-1-ol
- (c) 2-methylbutan-1-ol
- (d) 3-methylbutan-2-ol

**Answer: (d) 3-methylbutan-2-ol**

13. When salicylic acid is heated with  $\text{Zn}$  dust, the main product formed will be:

- (a) Benzene

- (b) phenol
- (c) Toluene
- (d) Benzoic acid

**Answer:(d) Benzoic acid**

14.Which of the following is used for denaturation of commercial alcohol

- (a) Copper sulphate
- (b) Pyridine
- (c) Methyl alcohol
- (d) All of the above

**Answer:(d) All of the above**

15.What is the product formed when phenol reacts with bromine water?

- (a) White precipitate
- (b) Red precipitate
- (c) Blue precipitate
- (d) No precipitate

**Answer: (a) White precipitate**