

Alcohols, Phenols, and Ethers - MCQs

1. Which of the following is the functional group of alcohols?

- a) -CHO
- b) -COOH
- c) -OH
- d) -O-

2. Phenol is more acidic than alcohols because:

- a) It has a hydroxyl group
- b) It forms a stable phenoxide ion
- c) It reacts with NaOH
- d) It has an aromatic ring

3. The IUPAC name of glycerol is:

- a) 1,2,3-Propanol
- b) 1,2,3-Propanetriol
- c) Propan-1-ol
- d) 2-Propanol

4. Which of the following alcohols cannot be oxidized easily?

- a) Primary alcohol
- b) Secondary alcohol
- c) Tertiary alcohol
- d) All can be oxidized easily

5. The major product formed when phenol reacts with bromine water is:

- a) 2-Bromophenol
- b) 4-Bromophenol
- c) 2,4,6-Tribromophenol
- d) 3-Bromophenol

6. Williamson synthesis is used to prepare:

- a) Alcohols
- b) Phenols
- c) Ethers
- d) Ketones

7. Which of the following compounds is least soluble in water?

- a) Methanol
- b) Ethanol
- c) Phenol

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d) Diethyl ether

8. What happens when ethanol is heated with concentrated H_2SO_4 at 443 K?

- a) Ether is formed
- b) Alkene is formed
- c) Alcohol is oxidized
- d) Aldehyde is formed

9. The dehydration of secondary alcohols gives:

- a) Primary alcohol
- b) Alkene
- c) Ketone
- d) Aldehyde

10. Which of the following is not an ether?

- a) Diethyl ether
- b) Ethoxyethane
- c) Methoxybenzene
- d) Propanol

11. The common name of methoxybenzene is:

- a) Phenol
- b) Anisole
- c) Catechol
- d) Benzyl alcohol

12. The reagent used to distinguish between primary, secondary, and tertiary alcohols is:

- a) Fehling's solution
- b) Lucas reagent
- c) Tollens' reagent
- d) Bromine water

13. The main product of the reaction of phenol with zinc is:

- a) Phenoxide ion
- b) Benzene
- c) Benzoquinone
- d) Toluene

14. Which of the following reagents does not react with phenol?

- a) NaOH

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- b) NaHCO_3
- c) Br_2 in CCl_4
- d) FeCl_3

15. The reaction of phenol with dilute HNO_3 gives:

- a) 2-Nitrophenol
- b) 4-Nitrophenol
- c) Both a and b
- d) Nitrobenzene

16. The product of the reaction of alcohol with hot copper at 573 K is:

- a) Aldehyde
- b) Carboxylic acid
- c) Ether
- d) Alkane

17. Which of the following is an electrophile in the nitration of phenol?

- a) NO_2^-
- b) NO_2^+
- c) H^+
- d) OH^-

18. The boiling point of alcohols is higher than ethers due to:

- a) Hydrogen bonding in ethers
- b) Hydrogen bonding in alcohols
- c) Van der Waals forces in alcohols
- d) Absence of polarity in alcohols

19. The major product of the reaction between phenol and chloroform in the presence of NaOH is:

- a) Salicylaldehyde
- b) Benzaldehyde
- c) Benzoic acid
- d) Phenoxide ion

20. When ether is exposed to air for a long time, it forms:

- a) Alcohol
- b) Peroxide
- c) Aldehyde
- d) Ketone

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Answer Key

1. c)
2. b)
3. b)
4. c)
5. c)
6. c)
7. d)
8. b)
9. b)
10. d)
11. b)
12. b)
13. b)
14. b)
15. c)
16. a)
17. b)
18. b)
19. a)
20. b)

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