

11. PHENOLS

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INTRODUCTION

Preparations

1. If benzene diazonium salt is warmed with water, what major product will it form?
 - a. Acetone
 - b. phenol
 - b. Benzene
 - d. chlorobenzene

Conversions

Physical Properties

Chemical Properties

1. Acidic nature

2. Which of the following aromatic compounds is capable of hydrogen bonding
 - a. Benzene
 - b. Chlorobenzene
 - c. Phenol
 - d. Nitrobenzene
3. When Benzene sulphonic acid is fused with NaOH and hydrolysed, it forms
 - a. Phenol
 - b. Sodium salicylate
 - c. Salicylic acid
 - d. Benzene
4. When Benzene diazonium chloride is hydrolyzed it gives
 - a. Alcohol
 - b. Benzene
 - c. Chlorobenzene
 - d. Phenol
5. Dow process is used for the preparation of
 - a. Benzene
 - b. Chlorobenzene
 - c. Phenol
 - d. Nitrobenzene
6. Phenol is
 - a. Slightly acidic
 - b. Strongly acidic
 - c. Slightly basic
 - d. Strongly basic
7. Phenol does not react with

- a. KOH
 - b. Na
 - c. NaOH
 - d. NaHCO_3
8. When Phenol is reacted with zinc dust we get
- a. Phenol
 - b. Benzaldehyde
 - c. Benzene
 - d. Chlorobenzene
9. When Phenol reacts with CHCl_3 and NaOH, it gives
- a. Benzaldehyde
 - b. Salicyldehyde
 - c. Salicylic acid
 - d. Benzoic acid
10. Reimer Tiemann's reaction yields
- a. Salicylaldehyde
 - b. Benzaldehyde
 - c. Benzoic acid
 - d. Aspirin
11. When phenol is heated with CHCl_3 and aq. KOH produces salicylaldehyde. This reaction is called
- a. Friedel-Craft's reaction
 - b. Rosenmund reaction
 - c. Reimer-Tiemann's reaction
 - d. Carbyl amine reaction
12. When Phenol is reacted with Benzene diazonium chloride in an alkaline medium at cold conditions, it gives an orange dye; the reaction is called
- a. Kolbe's carboxylation reaction
 - b. Diazotisation reaction
 - c. Reimer-Tiemann reaction
 - d. Coupling reaction
13. When sodium phenoxide is heated with CO_2 at about $125\text{--}135^\circ\text{C}$ and 4-7 atm pressure, followed by acidification gives salicylic acid; the reaction is
- a. Kolbe's carboxylation reaction
 - b. Diazotisation reaction
 - c. Reimer-Tiemann reaction
 - d. Friedel-Crafts reaction
14. Phenol on treatment with conc. HNO_3 in the presence of conc. H_2SO_4 gives
- a. m-nitroPhenol
 - b. o-nitroPhenol
 - c. p-nitroPhenol
 - d. Picric acid
15. Which of the following contains -OH functional group
- a. Picric acid
 - b. Acetic acid
 - c. Formic acid
 - d. Oxalic acid
16. Picric acid is
- a. 2,4,6-trinitro toluene
 - b. 2,4,6-trinitro Phenol

- c. 2,4-dinitro Phenol
 - d. 2,4,6-tribromoPhenol
17. Picric acid is an example of
- a. Azo dye
 - b. Phthalein dye
 - c. Nitro dye
 - d. Anthracene dye
18. Picric acid is a nitro substituent of
- a. Aniline
 - b. Phenol
 - c. Nitrolic acid
 - d. Salicylic acid
19. Picric acid is obtained by the nitration of
- (a) aniline
 - (b) phenol
 - (c) benzene
 - (d) benzoic acid
20. Rate of substitution in Phenol is
- a. Less than in Benzene
 - b. Same as in Benzene
 - c. Greater than in Benzene
 - d. Could not be known
21. The -OH group in the Phenol is
- a. Both o-, p- directing and deactivating
 - b. Both o-,p- directing and activating
 - c. Both m-directing and activating
 - d. Both m-directing and deactivating
22. Which of the following decreases the electron density in the Benzene ring to maximum extent?
- a. -OH
 - b. -Cl
 - c. -NH₂
 - d. -CH₃
23. When Phenol is treated with aqueous Br₂, it gives white ppt. of
- a. 2,4,6-trinitro toluene
 - b. 2,4,6-trinitro phenol
 - c. 2,4-dinitro phenol
 - d. 2,4,6-tribromophenol
24. Phenol reacts with bromine in CS₂ at low temperature to give
- a. 2,4,6-tribromophenol
 - b. o-bromophenol
 - c. o- bromophenol and p-bromophenol
 - d. p-bromophenol
25. FeCl₃ gives violet colour with
- a. Alcohols
 - b. Amines
 - c. Phenols
 - d. Aldehydes
26. Which of the following is not a test for Phenol?

- a. FeCl_3 test
- b. Aq. Br_2 test
- c. Fehling's test
- d. Libermann's test

27. Which of the compounds used in the formation of Bakelite, which gives a positive FeCl_3 test

- | | |
|-----------------|-----------------|
| a. Formaldehyde | c. phenol |
| b. Benzaldehyde | d. benzoic acid |

2. In the reaction of phenol with CHCl_3 and aq. NaOH under warm conditions, the electrophile is

- a. CHCl_3
- b. CHCl_2
- c. CCl_2
- d. COCl_2

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