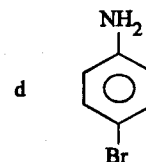
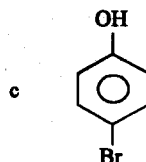
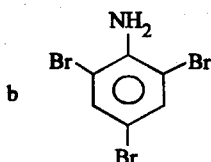
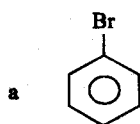


## Nitrogen Compounds

Std. XII  
CHEMISTRY

Time: 30 mts  
Max.Marks: 25

- Nitration of benzene involves
  - Electrophilic addition
  - Nucleophilic addition
  - Nucleophilic substitution
  - Electrophilic substitution
- The electrolytic reduction of nitro benzene in con.H<sub>2</sub>SO<sub>4</sub> gives
  - Phenyl hydroxylamine
  - Phenyl hydrazine
  - p*-aminophenol
  - m*-dinitro benzene
- The nitrogen compound used in the preparation of sulpha drugs is
  - Methylamine
  - Nitromethane
  - Amino benzene
  - Nitrobenzene
- The "Oil of Mirbane" is
  - Aniline
  - Nitrobenzene
  - Benzylamine
  - Nitromethane
- Aniline differs from ethylamine in its reaction with
  - CH<sub>3</sub>I
  - CHCl<sub>3</sub> and caustic potash
  - HNO<sub>2</sub>
  - CH<sub>3</sub>COCl
- $$\text{C}_6\text{H}_5\text{NH}_2 \xrightarrow[273\text{K}]{\text{NaNO}_2/\text{H}^+} (\text{X})$$
 Identify (X)
  - C<sub>6</sub>H<sub>5</sub>NHOH
  - C<sub>6</sub>H<sub>5</sub>Cl
  - C<sub>6</sub>H<sub>5</sub>N<sub>2</sub>Cl
  - C<sub>6</sub>H<sub>5</sub>OH
- p*-benzoquinone can be prepared by treating aniline with
  - HNO<sub>2</sub>
  - CHCl<sub>3</sub>/KOH
  - K<sub>2</sub>Cr<sub>2</sub>O<sub>7</sub>/H<sup>+</sup>
  - HNO<sub>3</sub>
- When benzyl amine is treated with nitrous acid, the gas evolved is
  - H<sub>2</sub>
  - N<sub>2</sub>
  - NH<sub>3</sub>
  - O<sub>2</sub>
- Amines acts as base, because of
  - Tetrahedral structure
  - Lone pair of electrons on nitrogen atom
  - Presence of nitrogen atom
  - High electronegativity of nitrogen
- The reduction CH<sub>3</sub> - CH<sub>2</sub> - C≡N with sodium and alcohol results in the formation of
  - $\text{H}_3\text{C} - \underset{\text{NH}_2}{\text{CH}} - \text{CH}_3$
  - CH<sub>3</sub> - CH<sub>2</sub> - CH<sub>2</sub> - NH<sub>2</sub>
  - CH<sub>3</sub> - CH<sub>2</sub> - NH<sub>2</sub>
  - CH<sub>3</sub> - CH<sub>2</sub> - CH<sub>2</sub> - OH + N<sub>2</sub>
- When aniline is treated with Br<sub>2</sub>/H<sub>2</sub>O, the product obtained is



12. Identify the incorrect statement regarding aniline
- Aniline is a weak base than ethyl amine,
  - Aniline turns brown on exposure to air
  - Aniline has a lower boiling point than benzene
  - Electrophilic substitution in aniline takes place at ortho and para position
13. Primary amine acts as
- Lewis base
  - Free radicals
  - Lewis acid
  - Electrophile
14. The reaction in which benzene diazonium chloride is converted to biphenyl is known as
- Sandmeyer reaction
  - Gattermann reaction
  - Gomberg reaction
  - Diazotisation
15.  $C_6H_5N_2Cl \xrightarrow{Zn/HCl} X$ . Identify X.
- $C_6H_5NH_2$
  - $C_6H_5NHNH_2$
  - $C_6H_6$
  - $C_6H_5OH$
16. When  $CH_3 - CH = NOH$  is distilled with  $P_2O_5$ , the product obtained is
- $CH_3CN$
  - $CH_3NC$
  - $CH_3CH_2NH_2$
  - $CH_3CH_2NO_2$
17. The primary nitro compound among the following is
- $(C_6H_5)_2CHNO_2$
  - $CH_3NO_2$
  - $(CH_3)_2 - CH - NO_2$
  - $(C_6H_5)_3C - NO_2$
18. The Schiff's base is obtained, when primary amine reacts with
- Alcohol
  - Chloroform
  - Aldehyde
  - Carbon disulphide
19. When aniline is treated with, excess of  $CH_3I$ , the final product obtained in
- $C_6H_5NHCH_3$
  - $(C_6H_5)_2N^+(CH_3)_2I^-$
  - $C_6H_5N^+(CH_3)_3I^-$
  - $(CH_3)_4NI^+$
20. When aniline is treated with nitrating mixture, the product formed is
- p*-nitro aniline
  - o*-nitro aniline
  - m*-nitro aniline
  - m*-dinitro aniline
21. Phenol is obtained, when benzene diazonium chloride is boiled with
- NaOH
  - HCl
  - $H_2O$
  - $NaNO_2$
22. Gabriel phthalimide synthesis is used in the preparation of
- Isocyanides
  - Cyanides
  - Secondary amine
  - Primary amine
23. The organic compound that undergoes mustard oil reaction in
- $(C_2H_5)_2NH$
  - $C_2H_5NH_2$
  - $(C_2H_5)_3N$
  - $(C_2H_5)_4N^+I^-$
24. Which of the following can undergo diazotisation?
- p*-aminophenol
  - Ammonia
  - Methylamine
  - Ethylamine
25. When benzylamine is reacted with  $KMnO_4$ , the product formed is
- Benzoic acid
  - Phenol
  - Aniline
  - Phenyl cyanide