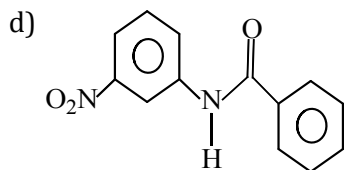
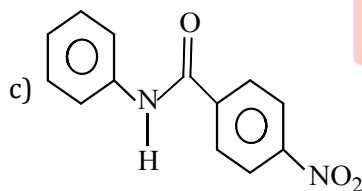
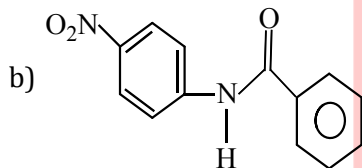
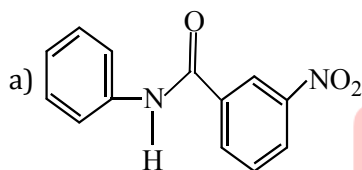
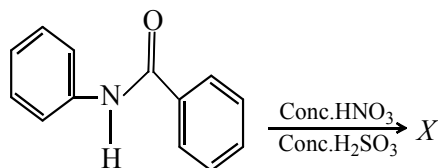


## Topic :- Amines

1. In the following reaction, the product *X* is:



2. Indicate the correct statement.

- a)  $C_2H_5N^+H_3OH^-$  is acidic
- b)  $C_2H_5NH_2$  is less basic than  $NH_3$
- c)  $C_2H_5NH_2$  is a stronger base than  $NH_3$
- d)  $C_2H_5NH_2$  forms salts with bases

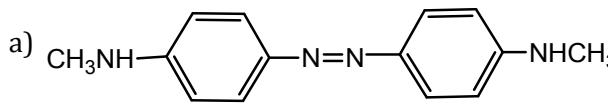
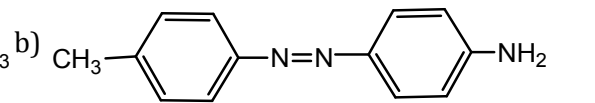
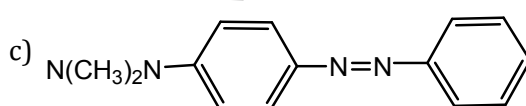
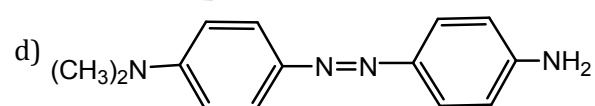
3. The compound will react most readily with NaOH to form methanol is
- a)  $(\text{CH}_3)_4\text{N}^+\text{I}^-$       b)  $\text{CH}_3\text{OCH}_3$       c)  $(\text{CH}_3)_3\text{S}^+\text{I}^-$       d)  $(\text{CH}_3)_3\text{CI}$
4. Increasing order of basicity of  $\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$ ,  $\text{H}_2\text{C} = \text{CHCH}_2\text{NH}_2$  and  $\text{HC} \equiv \text{CCH}_2\text{NH}_2$  is
- a)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2 < \text{HC} \equiv \text{CCH}_2\text{NH}_2 < \text{H}_2\text{C} = \text{CHCH}_2\text{NH}_2$   
 b)  $\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2 < \text{H}_2\text{C} = \text{CHCH}_2\text{NH}_2 < \text{HC} \equiv \text{CCH}_2\text{NH}_2$   
 c)  $\text{HC} \equiv \text{CCH}_2\text{NH}_2 < \text{H}_2\text{C} = \text{CHCH}_2\text{NH}_2 < \text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$   
 d)  $\text{HC} \equiv \text{CCH}_2\text{NH}_2 < \text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2 < \text{H}_2\text{C} = \text{CHCH}_2\text{NH}_2$
5. Reduction of aniline with acetyl chloride in presence of NaOH produce
- a) Aniline hydrochloride      b) Acetanilide      c) *p*-chloroaniline      d) A red dye
6. The molecular formula  $\text{C}_3\text{H}_9\text{N}$  cannot represent
- a) 1° amine      b) 2° amine      c) 3° amine      d) Quaternary salt
7. (A)  $\text{C}_2\text{H}_5\text{NH}_2 \xrightarrow{\text{(i) NOCl}} [W] \xrightarrow{\text{(ii) AgNO}_2}$   
 (B)  $(\text{CH}_3)_2\text{CHNH}_2 \xrightarrow{\text{(i) NOCl}} [X] \xrightarrow{\text{(ii) AgNO}_2}$   
 (C)  $(\text{CH}_3)_3\text{CNH}_2 \xrightarrow{\text{(i) NOCl}} [Y] \xrightarrow{\text{(ii) AgNO}_2}$   
 (D)  $\text{CH}_3\text{CH}(\text{NH}_2)\text{C}_2\text{H}_5 \xrightarrow{\text{(i) NOCl}} [Z] \xrightarrow{\text{(ii) AgNO}_2}$
- Which product will not show tautomerism?
- a) W      b) X      c) Y      d) Z
8. Carcinogens are the products of the reaction between:
- a)  $\text{R}_2\text{NH} + \text{HNO}_2$       b)  $\text{R}_3\text{N} + \text{HNO}_2$       c)  $\text{RNH}_2 + \text{HNO}_2$       d) None of these
9. Acetonitriles on hydrolysis produce which of the following?
- a) Amine      b) Acid      c) Amides      d) Carbonyl compounds
10. Primary, secondary and tertiary nitroalkanes can be identified by the action of:
- a)  $\text{HNO}_2 + \text{NaOH}(aq.)$       b)  $\text{CHCl}_3 + \text{NaOH}(aq.)$       c)  $\text{CHCl}_3 + \text{KOH}(alc.)$       d) None of these
11. Methyl cyanide gives on hydrolysis
- a) Methyl amine      b) Acetic acid      c) Formic acid      d) Ethyl amine
12. The hydrochlorides of amines form double salt with:

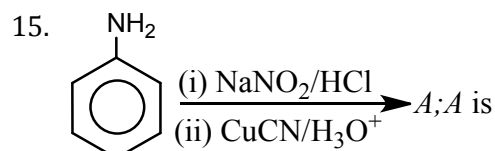
- a)  $\text{PtCl}_4$                       b)  $\text{AuCl}_3$                       c) Both (a) and (b)                      d) None of these

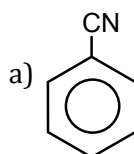
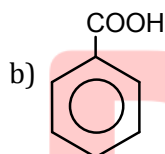
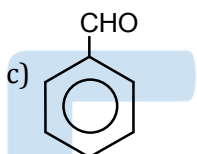
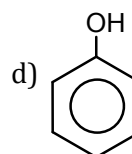
13. General formula of an amine is:

- a)  $\text{C}_n\text{H}_{2n+1}\text{N}$                       b)  $\text{C}_n\text{H}_{2n+2}\text{N}$                       c)  $\text{C}_n\text{H}_{2n+3}\text{N}$                       d)  $\text{C}_n\text{H}_{2n}\text{N}$

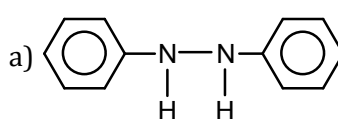
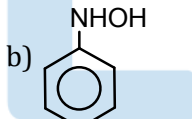
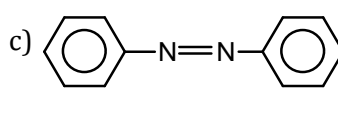
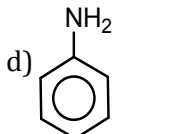
14. Aniline when diazotized in cold and then treated with dimethyl aniline gives a coloured product. Its structure would be

- a)                       b) 
- c)                       d) 

15.   $\xrightarrow[\text{(ii) CuCN/H}_3\text{O}^+]{\text{(i) NaNO}_2/\text{HCl}}$  A; A is

- a)                       b) 
- c)                       d) 

16. The structure of the compound formed, when nitrobenzene is reduced by lithium aluminium hydride ( $\text{LiAlH}_4$ ) is

- a)                       b) 
- c)                       d) 

17. Aniline and ethylamine resembles in:

- a) Solubility  
b) Action with  $\text{HNO}_2$   
c) Action of Grignard reagent  
d) Coupling reaction

18. Reaction of cyclohexanone with dimethylamine in the presence of catalytic amount of an acid forms a compound of water during the reaction is continuously removed. The compound formed is generally known as

- a) An amine                      b) An imine                      c) An enamine                      d) A Schiff's base

19. Comparing basic strength of  $\text{NH}_3$ ,  $\text{CH}_3\text{NH}_2$  and  $\text{C}_6\text{H}_5\text{NH}_2$  it may be concluded that

- a) Basic strength remains unaffected                      b) Basic strength of alkyl amines is lowest  
c) Basic strength of aryl amines is lowest                d) Basic strength of  $\text{NH}_3$  is highest

20. The product obtained when methylamine is treated with nitrous acid is:

- a)  $\text{CH}_3\text{OH}$                       b)  $\text{CH}_3\text{—ONO}$                       c)  $\text{CH}_3\text{OCH}_3$                       d) Both (b) and (c)

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