

**Class : XII<sup>th</sup>**  
**Date :**

**Subject : CHEMISTRY**  
**DPP No. : 6**

## Topic :- Amines

- Allyl isocyanide contains .....and.....bonds.
  - $9\sigma, 3\pi$
  - $9\sigma, 9\pi$
  - $3\sigma, 4\pi$
  - $5\sigma, 7\pi$
- Mendius method of preparation of amines consists of:
  - Catalytic reduction of alkyl cyanides
  - Reduction of amide with  $\text{LiAlH}_4$
  - Reduction of nitroparaffin with  $\text{Sn} + \text{HCl}$
  - Reduction of oximes with  $\text{Na} + \text{C}_2\text{H}_5\text{OH}$
- The compound having the molecular formula  $\text{C}_3\text{H}_9\text{N}$  represent :
  - Trimethylamine
  - n*-propylamine
  - Isopropylamine
  - All of these
- From the following compounds which does not react with  $\text{C}_6\text{H}_5\text{SO}_2\text{Cl}$ ?
  - $\text{C}_2\text{H}_5\text{.NH}_2$
  - $\text{CH}_3\text{.NH}_2$
  - $(\text{CH}_3)_2\text{NH}$
  - $(\text{C}_2\text{H}_5)_3\text{N}$
- Identify *A* and *B* in the reaction given below.
 
$$\text{Ethane nitrile} \xrightarrow[\substack{\text{aq. H}_2\text{SO}_4 \\ +2\text{H}_2\text{O} \\ -\text{NH}_3}]{\text{Hydrolysis}} \text{A} \xrightarrow[\substack{\text{Sodalime} \\ \Delta \\ -\text{CO}_2}]{\text{Decarboxylation}} \text{B}$$
  - Acetic acid, methanol
  - Acetone, methane
  - Ethanoic acid, ethane
  - Ethanoic acid, methane
- The compound formed when malonic ester reacts with urea is:
  - Cinnamic acid
  - Butyric acid
  - Barbituric acid
  - Crotonic acid
- Decreasing order of basicity of the three isomers of methoxyaniline is

- a)  $p\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2 > o\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2 > m\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2$   
 b)  $p\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2 > m\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2 > o\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2$   
 c)  $o\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2 > p\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2 > m\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2$   
 d)  $o\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2 > m\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2 > p\text{-CH}_3\text{OC}_6\text{H}_4\text{NH}_2$
8. Nitrogen of nitrobenzene at  $125^\circ\text{C}$  with mixed acids gives  
 a) *meta*-dinitrobenzene  
 b) *ortho*-dinitrobenzene  
 c) *para*-dinitrobenzene  
 d) 1, 3, 5-trinitrobenzene
9. The value of  $K_b$  is highest in case of:  
 a) *p*-methoxy aniline    b) *p*-chloroaniline    c) *p*-nitroaniline    d) *p*-methylaniline
10. Benzene diazonium chloride on reaction with phenol in weakly basic medium gives  
 a) Diphenyl ether    b) *p*-hydroxy azobenzene    c) Chlorobenzene    d) Benzene
11.  $R\text{-N}\equiv\text{C} + \text{HgO} \rightarrow A + \text{Hg}_2\text{O}$ ; What is  $A$ ?  
 a)  $\text{RNH}_2$     b)  $\text{RCONH}_2$     c)  $\text{R-NCO}$     d)  $\text{RCOOH}$
12. Amine oxide, when heated forms alkene. The reaction is known as  
 a) Curtius    b) Cope elimination  
 c) Mannich reaction    d) Hofmann elimination
13. Identify the product in the following sequence 3, 4, 5-tribromoaniline  
 $\xrightarrow[\text{(ii) H}_3\text{PO}_2]{\text{(i) Diazotization}} ?$   
 a) 3, 4, 5-tribromobenzene    b) 1, 2, 3-tribromobenzene  
 c) 2, 4, 6-tribromobenzene    d) 3, 4, 5-tribromonitrobenzene
14. Identify the product  $Z$  in the following reaction scheme  
 $\text{C}_6\text{H}_5\text{NH}_2 \xrightarrow{\text{Ac}_2\text{O}} \text{X} \xrightarrow{\text{Br}_2/\text{CCl}_4} \text{Y} \xrightarrow{\text{HOH}} \text{Z}$   
 a) *p*-bromoaniline    b) *p*-bromoacetophenone  
 c) *p*-bromoacetanilide    d) *o*-bromoacetophenone
15. In the following reaction,  $\text{X} \xrightarrow{\text{Bromination}} \text{Y} \xrightarrow[\text{+HCl}]{\text{NaNO}_2} \text{Z} \xrightarrow[\text{C}_2\text{H}_5\text{OH}]{\text{Boiling}}$  tribromo benzene.  $X$  is

- a) Benzoic acid                      b) Salicylic acid                      c) Phenol                      d) Aniline
16. The compound, N-ethyl-N-methylpropanamine forms non- superimposable mirror image but does not show optical activity. This is due to  
 a) Absence of a chiral N-atom                      b) Presence of a chiral N- atom  
 c) Presence of lone pair on N-atom                      d) Rapid flipping of one from into another
17. Which of the following statement about primary amines is false?  
 a) Alkylamines are stronger base than arylamines  
 b) Alkylamines react with nitrous acid to produce alcohols  
 c) Arylamines react with nitrous acid to produce phenols  
 d) Alkylamines are stronger bases than ammonia.
18. How many primary amines are possible for the formula  $C_4H_{11}N$ ?  
 a) 1                      b) 2                      c) 3                      d) 4
19. What is the decreasing order of basicity of *p*-, *s*-, *t*-ethyl amines and  $NH_3$ ?  
 a)  $NH_3 > C_2H_5NH_2 > (C_2H_5)_2NH > (C_2H_5)_3N$   
 b)  $(C_2H_5)_3N > (C_2H_5)_2NH > C_2H_5NH_2 > NH_3$   
 c)  $(C_2H_5)_2NH > C_2H_5NH_2 > NH_3 > (C_2H_5)_3N$   
 d)  $(C_2H_5)_2NH > (C_2H_5)_3N > C_2H_5NH_2 > NH_3$
20. In the reaction  

$$CH_3CN + 2H \xrightarrow[SnCl_2]{HCl} X \xrightarrow{Boiling H_2O} Y,$$
  
 The term *Y* is,  
 a) Acetone                      b) Ethanamine                      c) Acetaldehyde                      d) Dimethyl amine