DPP
DAILY PRACTICE PROBLEMS

Class : XIIth | **Solutions** | **Subject : CHEMISTRY**
Date : | | **DPP No. : 7**

Topic :- Amines

1 **(c)**

R—$NH_2 + HNO_2 \longrightarrow ROH + N_2 + H_2O$; But note that CH_3NH_2 gives CH_3ONO or CH_3OCH_3 on treating with HNO_2.

2 **(c)**

The conversion of —CN to —CH_2NH_2 by catalytic reduction is called Mendius reaction.

4 **(c)**

Schmidt reaction

$$R-\overset{\overset{\displaystyle O}{||}}{C}-OH \xrightarrow[H_2SO_4]{NaN_3} R-NH_2+N_2+CO_2$$

6 **(c)**

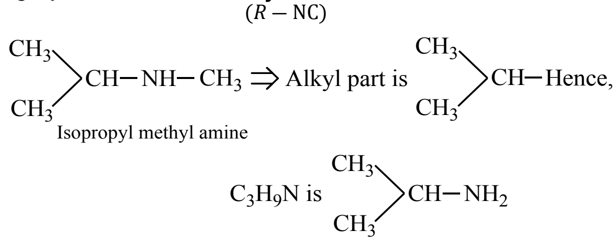
Methylaminomethane is trivial name of N-methyl methanamine $(CH_3)_2NH$.

7 **(a)**

$C_3H_9N(A) \xrightarrow{HNO_2}$ Alcohol $+ N_2\} \Rightarrow A$ is 1° amine, *i.e.*,

C_3H_9N is $C_3H_7NH_2$

$C_3H_9N \xrightarrow{KOH + CHCl_3} \underset{(R-NC)}{\text{Carbylamine}} \xrightarrow{\text{Reduction}}$



8 **(c)**

$$NH_2CONH_2 + HNHCONH_2 \xrightarrow{\Delta} \underset{\text{Biuret}}{NH_2CONHCONH_2}$$

9 **(c)**

In tertiary amines, no H-atom is attached directly to the more electronegative N-atom. Hence, it has no tendency to form H-bond

10 **(a)**

The order of boiling points of the isomeric amines is as fallows :

Primary amines > secondary amines > tertiary amines

$(1° > 2° > 3°)$

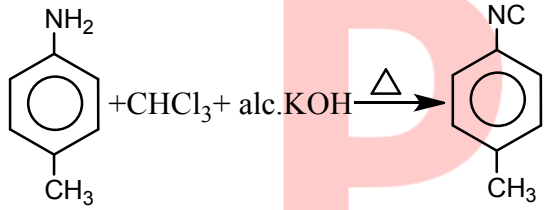
11 **(c)**

$R—CONH_2 + Br_2 + KOH \longrightarrow R—NH_2$

12 **(c)**

$C_2H_5NH_2 \xrightarrow{HNO_2} C_2H_5OH + N_2\uparrow + H_2O$

16 **(d)**



p-toluidine (a carbylamine reaction)

17 **(a)**

Ethyl isocyanide on hydrolysis in acidic medium gives methanoic acid and ethyl amline salt

$C_2H_5NC + H_2O \xrightarrow{H+} HCOOH + C_2H_5NH_2$

methanoic acid

$C_2H_5NH_2 + H^+ \rightarrow C_2H_5NH_3^+$

Ethylamine salt

18 **(d)**

$CH_3I + NH_3 \longrightarrow CH_3NH_2 \xrightarrow{CH_3I} (CH_3)_2NH \xrightarrow{CH_3I} (CH_3)_3N \xrightarrow{CH_3I} (CH_3)_4N^+I^-$

20 **(c)**

Secondary amine on reaction with aq. HNO_2 at low temperature produces yellow oily nitrosoamines. $CH_3CH_2NHCH_2CH_3$ is secondary amine.

ANSWER-KEY										
Q.	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
A.	**C**	**C**	**C**	**C**	**D**	**C**	**A**	**C**	**C**	**A**
Q.	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	**19**	**20**
A.	**C**	**C**	**C**	**B**	**A**	**D**	**A**	**D**	**D**	**C**