

## ORGANIC COMPOUNDS CONTAINING NITROGEN

1. In Gattermann reaction, a diazonium group is replaced by using , and are (EAMCET-2009)

- |                 |              |
|-----------------|--------------|
| 1) $Cl^\ominus$ | Cu/HCl       |
| 2) $Cl^\oplus$  | $CuCl_2/HCl$ |
| 3) $Cl^\ominus$ | $CuCl_2/HCl$ |
| 4) $Cl_2$       | $Cu_2O/HCl$  |

2. Nitro benzene on reduction with Sn/HCl gives 'A' which on reaction with acetyl chloride forms 'B' which of the following is 'B'? (MEDICAL -2000)

- 1)  $C_6H_5-CO-CH_3$       2)  $C_6H_5-NH-CO-CH_3$       3)  $C_6H_5-NHCl$       4)  $C_6H_5-O-CO-CH_3$

3. Which of the following is a secondary amine? (EAMCET- 2000)

1.  $H_2N-NH_2$       2.  $CH_3-NH_2$       3.  $(CH_3)_2NC_6H_5$       4.  $C_6H_5-NH-CH_3$

4. Aniline on heating with 'X' in the presence of KOH gives a product with very bad smell. Which of the following is 'X' ? (MEDICAL - 2000)

- 1)  $CH_3Cl$       2)  $CHCl_3$       3)  $CHCl_2$       4)  $C_2H_5Cl$

5. Aniline is not the major product in one of the following reactions. Identify that reaction. (EAMCET-2003)

- 1)  $C_6H_5OH + NH_3 \xrightarrow[300^\circ C]{ZnCl_2}$
- 2)  $C_6H_5NO_2 + Zn \text{ Powder} \xrightarrow{\text{alcoholic KOH}}$
- 3)  $C_6H_5Cl + NH_3 \xrightarrow[CH_2O]{20^\circ C}$
- 4)  $C_6H_5NO_2 + Fe + H_2O \xrightarrow{HCl}$

6. In the series of reactions  $C_6H_5NH_2 \xrightarrow[0-5^\circ C]{NaNO_2/HCl} X \xrightarrow[CH_2O]{HNO_2} Y + N_2 + HCl$  X and Y are respectively

(MEDICAL 2003)

- 1)  $C_6H_5-N=N-C_6H_5, C_6H_5N_2^+Cl^-$       2)  $C_6H_5N_2^+Cl^-, C_6H_5-N=N-C_6H_5$
- 3)  $C_6H_5N_2^+Cl^-, C_6H_5NO_2$       4)  $C_6H_5NO_2, C_6H_6$

7. Which one of the following compounds forms a quarternary salt on reacting with excess methyl iodide ? (EAMCET2004)

- 1)  $C_2H_5OCH_3$       2)  $(CH_3)_2CHOC_2H_5$       3)  $C_6H_5NH_2$       4)  $C_6H_5NO_2$

8. Aniline reacts with ... to yield..... as the final product. (MEDICAL 2004)

- 1) bromine, 2-bromoaniline  
 2) bromine, 2,4,6-tribromoaniline  
 3) chloroform|KOH, Phenyl cyanide  
 4) acetyl chloride, benzanilide

9. Carbylamine test is used to detect which one of the following ? (EAMCET 2011)

- 1)  $C_6H_5CHO$       2)  $C_6H_5CO_2H$       3)  $C_6H_5NH_2$       4)  $C_6H_5OH$

10. The reaction between primary amine. Chloroform and few drops of alcoholic KOH is known as:

(AFMC 2008)

- 1) Hofmann's reaction  
 2) Kolbe's reaction  
 3) Carbylamine reaction  
 4) Reimer - Tiemann's reaction

11. An isonitrile on reduction gives; (JIPMER-2005)

- 1)  $3^0$  amine      2)  $2^0$  amine      3)  $1^0$  amine      4) quaternary ammonium salt

12. An aliphatic amine on treatment with alcoholic carbon disulphide and mercuric chloride from ethyl isothiocyante, the reaction is known as: (AIIMS-2007)

- 1) Hofmann's reaction  
 2) Hofmann's rearrangement  
 3) Hofmann's mustard oil reaction  
 4) Hofmann's bromamide degradation reaction

13. In the following sequence of reactions, what is 'D' ? (AIIMS 2007)

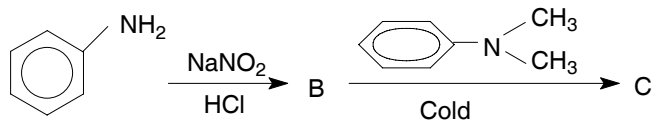


- 1) Primary amine      2) An amide  
 3) Phenyl isocyanate      4) chain lengthened hydrocarbon

14. Toluene is nitrated and the resulting product is reduced with tin and hydrochloric acid. The product so obtained is diazotized and then heated with cuprous bromide. The reaction mixture so formed contains (AIPMT 2008)

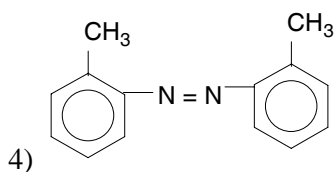
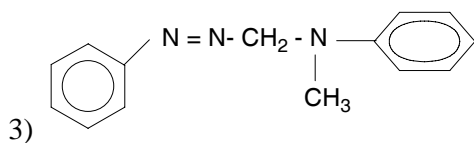
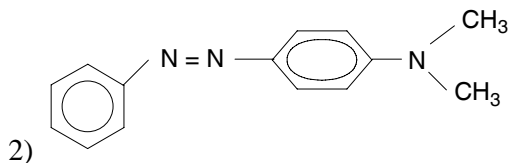
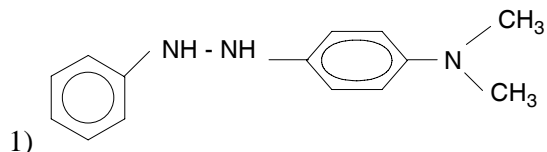
- 1) mixture of O-and m-bromotoulenes      2) mixture of O-and p-bromotoulenes  
 3) mixture of O-and p-dibromo benzenes      4) mixture of O-and p-bromo anilines

15. In a reaction of aniline, a coloured product 'C' was obtained



The structure of 'C' would be

(AIPMT 2008)



**KEY**

- 1) 1    2) 2    3) 4    4) 2    5) 2  
 6) 3    7) 3    8) 2    9) 3    10) 3  
 11) 2    12) 3    13) 3    14) 2    15) 2