CBSE Class 12 physics
Important Questions
Chapter 13
Amines

1 Mark Questions

1.For an amine RNH_2, write an expression to indicate its basic strength.

Ans.

$$RNH_2 + H_2O \rightleftharpoons RNH_3^+ + OH^-$$

$$K_b = \frac{[RNH_3^+]\ [OH^-]}{[RNH_2]}$$

2. Give one use of quaternary ammonium salts.

Ans. Quaternary ammonium salts are widely used for manufacture of synthetic detergents.

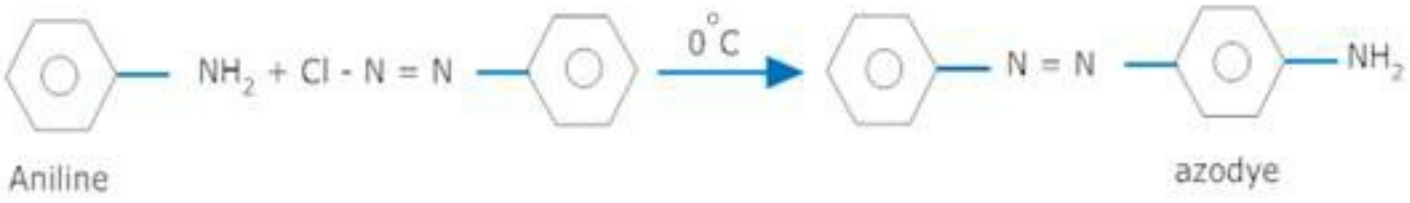
3. Give one example of Hoffmann – Bromamide reaction

Ans. In Hoffmann – Bromamide reaction an acid amide is reacted with Bromine in presence of a base to give a primary amine having one carbon less than the starting amide.

$$RCONH_2 + Br_2 + 4\ NaOH \rightarrow RNH_2 + Na_2CO_3 + 2\ NaBr + 2\ H_2O$$

4. Distinguish between ethylamine and aniline.

Ans. Ethylamine and aniline can be distinguished by azodye test. On treating aniline with benzene diazonium salt, orange or red coloured azodye is formed which is not formed with ethyl amine.



5.The IUPAC name of secondary amine having lowest molecular mass is _____.

Ans. N- Methylmethanamine.

6.Give an example of diazotization

Ans. During diazotization benzene diazonium chloride is prepared by the reaction of aniline with nitrous acid at 273 – 278 K

7. Write one use of diazonium salt

Ans. Diazonium salts are used in preparation of substituted aromatic compounds.

8.How can the reactivity of aromatic amines be controlled?

Ans. The reactivity of aromatic amines can be controlled by acylation.

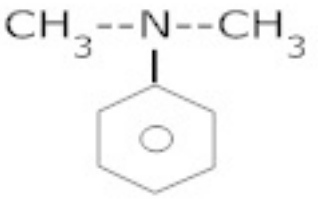
9.Give one use of tertiary amines.

Ans. Tertiary amines like trimethylamine are used as insect attractants.

10. Name a reagent which can distinguish between primary, secondary and tertiary amine

Ans. P- Toluenesulphonyl chloride Hinsberg reagent can be used as a distinguishing reagent for primary, secondary and tertiary amines.

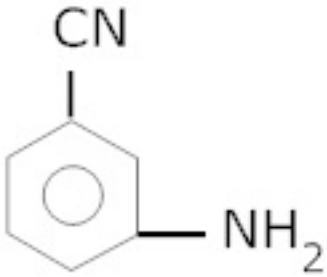
11.Give IUPAC name of

(i) 

Ans.N, N–dimethylaniline

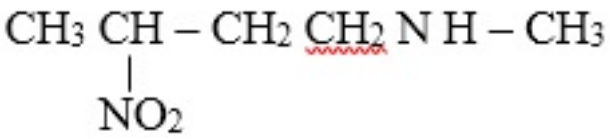
(ii) $m-NC\ C_6H_4NH_2$

Ans.



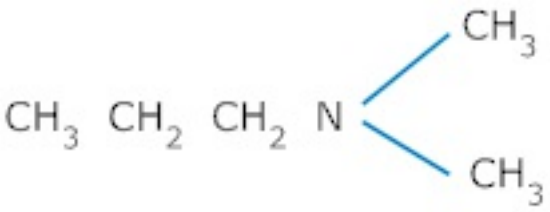
3-aminobenzonitrile

(iii)



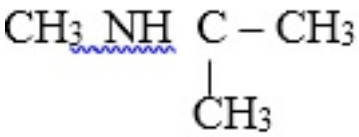
Ans.N- methyl -3 – nitro -1- butanamine

(iv)

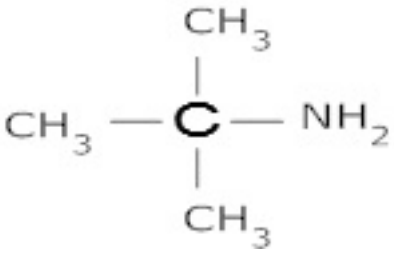


Ans.N, N – dimethylpropanamine

(v)

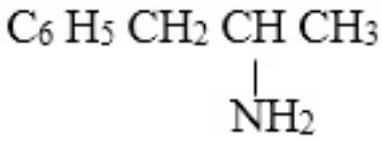


Ans.N- methyl -2- aminopropanamine

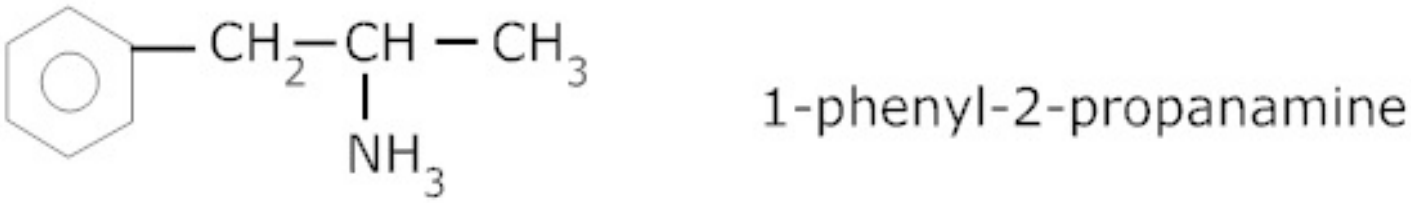
(vi) 

Ans.2- Methyl propane

(vii)

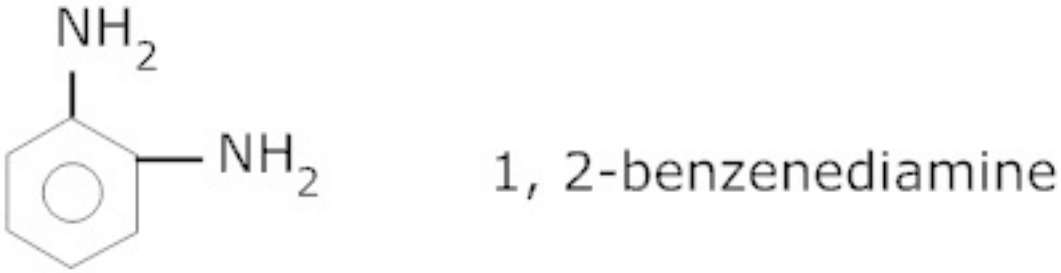


Ans.

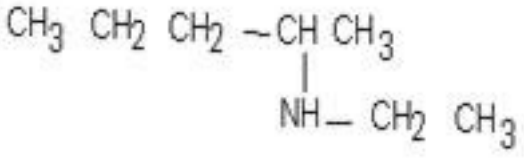


(viii) $O-(NH_2)_2C_6H_4$

Ans.

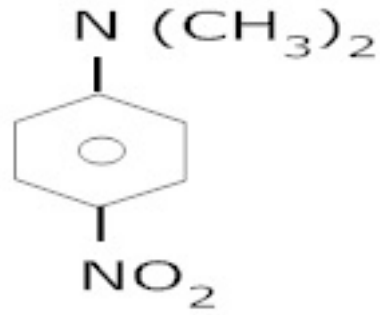


(ix)



Ans. N – Ethyl pentan-2-amine

(x)



Ans.N, N – Dimethyl-4-nitro aniline

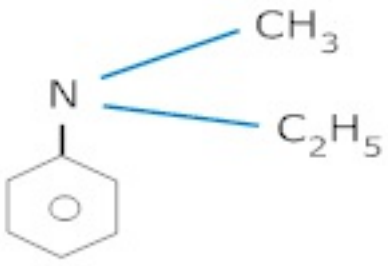
12.Write structure of following

(i) Aminobut -2- ene

Ans. $NH_2CH_2CH = CH\ CH_3$

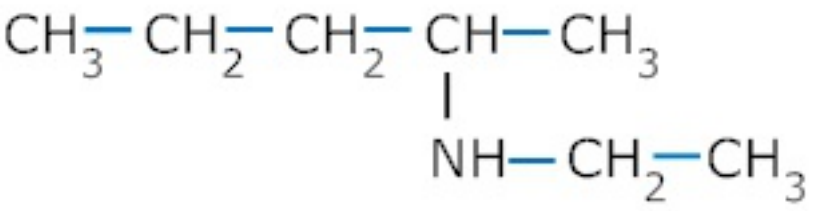
(ii) N- Methyl –N- ethylaniline

Ans.



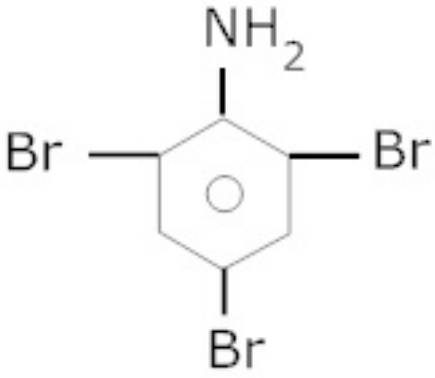
(iii) N- Ethyl -2- pentanamine

Ans.



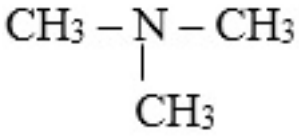
(iv) 2,4,6 – Tribromoaniline

Ans.



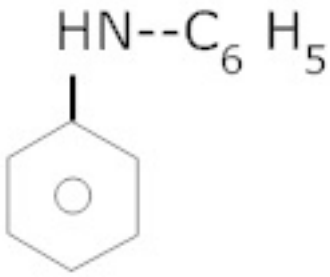
(v) N, N- Dimethyl methanamine

Ans.



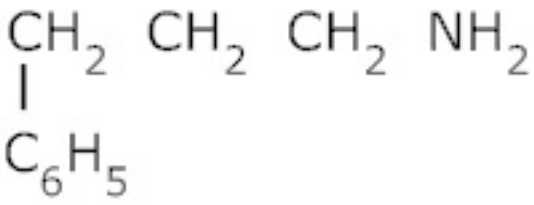
(vi) N- Phemylaniline

Ans.



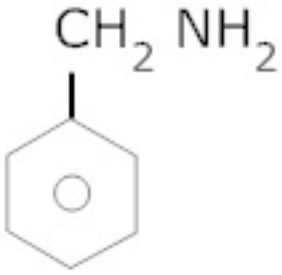
(vii) 3-Phenyl propanamine

Ans.



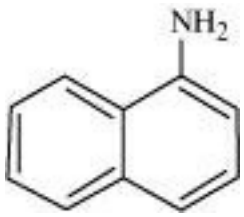
(viii) Benzylamine

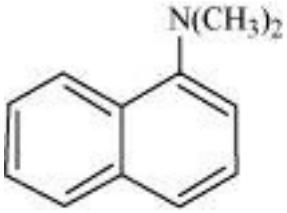
Ans.



IUPAC name - 1- Phemylmethamine

13.Classify the following amines as primary, secondary or tertiary:

(i) 

(ii) 

(iii) $(C_2H_5)_2CHNH_2$

(iv) $(C_2H_5)_2NH$

Ans. Primary: **(i)** and **(iii)**

Secondary: **(iv)**

Tertiary: **(ii)**