



Organic Compounds Containing Nitrogen(Amines)

Q.No.1:

Give the IUPAC name of $\text{H}_2\text{N} - \text{CH}_2 - \text{CH}_2 - \text{CH} = \text{CH}_2$.

CBSE Board Paper 2010

Q.No.2:

In the following cases rearrange the compounds as directed:

(i) In an increasing order of basic strength:

$\text{C}_6\text{H}_5\text{NH}_2$, $\text{C}_6\text{H}_5\text{N}(\text{CH}_3)_2$, $(\text{C}_2\text{H}_5)_2\text{NH}$ and CH_3NH_2

(ii) In a decreasing order of basic strength:

Aniline, p-nitroaniline and p-toluidine

(iii) In an increasing order of pK_b values:

$\text{C}_2\text{H}_5\text{NH}_2$, $\text{C}_6\text{H}_5\text{NHCH}_3$, $(\text{C}_2\text{H}_5)_2\text{NH}$ and $\text{C}_6\text{H}_5\text{NH}_2$

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Q.No.3:

Arrange the following in the decreasing order of their basic strength in aqueous solutions:

CH_3NH_2 , $(\text{CH}_3)_2\text{NH}$, $(\text{CH}_3)_3\text{N}$ and NH_3

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Q.No.4:

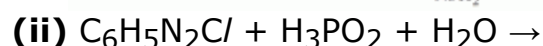
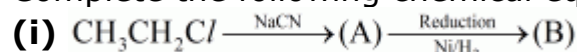
Arrange the following compounds in an increasing order of their solubility in water:

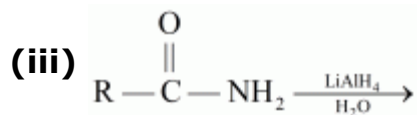
$\text{C}_6\text{H}_5\text{NH}_2$, $(\text{C}_2\text{H}_5)_2\text{NH}$, $\text{C}_2\text{H}_5\text{NH}_2$

CBSE Board Paper 2011

Q.No.5:

Complete the following chemical equations:

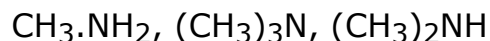




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Q.No.6:

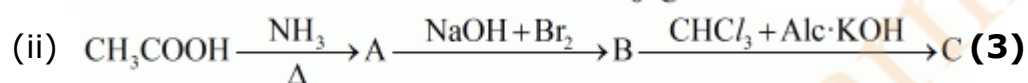
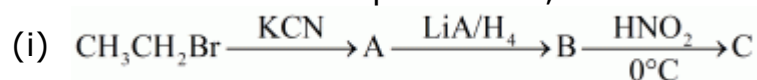
Arrange the following in increasing order of their basic strength in aqueous solution:



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Q.No.7:

Give the structures of products A, B and C in the following reactions:



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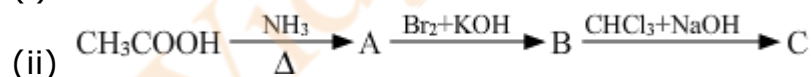
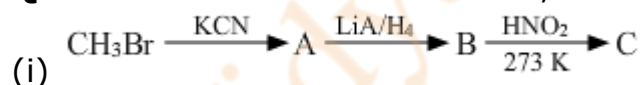
Q.No.8:

Write chemical equation for the following conversions:

- (i) Nitrobenzene to benzoic acid.
- (ii) Benzyl chloride to 2-phenylethanamine.
- (iii) Aniline to benzyl alcohol.

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Q.No.9: Give the structures of A, B and C in the following reactions :



OR

How will you convert the following?

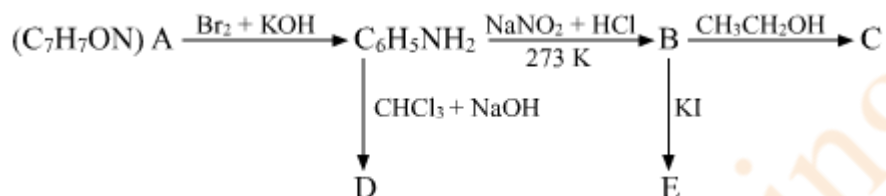
- (i) Nitrobenzene into aniline
 - (ii) Ethanoic acid into methanamine
 - (iii) Aniline into N-phenylethanamide
- (Write the chemical equations involved.)

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Q.No.10: Arrange the following in increasing order of basic strength :
 $\text{C}_6\text{H}_5\text{NH}_2$, $\text{C}_6\text{H}_5\text{NHCH}_3$, $\text{C}_6\text{H}_5\text{N}(\text{CH}_3)_2$ **CBSE Board Paper 2014**

Q.No.11:

An aromatic compound 'A' of molecular formula $\text{C}_7\text{H}_7\text{ON}$ undergoes a series of reactions as shown below. Write the structures of A, B, C, D and E in the following reactions :

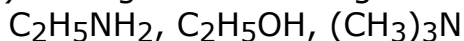


OR

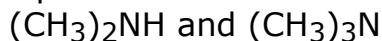
(a) Write the structures of main products when aniline reacts with the following reagents :

- Br_2 water
- HCl
- $(\text{CH}_3\text{CO})_2\text{O}$ /pyridine

(b) Arrange the following in the increasing order of their boiling point :



(c) Give a simple chemical test to distinguish between the following pair of compounds :



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Q.No.12: Write the IUPAC name of the given compound:

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