



# INDIAN SCHOOL NIZWA - WORKSHEET

## CHEMISTRY

### CH: 12 AMINES

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Class: XII Sec: \_\_\_\_

### Answer the following

- Arrange the following as mentioned.
  - $\text{CH}_3\text{NH}_2, (\text{CH}_3)_2\text{NH}, (\text{CH}_3)_3\text{N}, \text{NH}_3$  in the decreasing order of basic strength.
  - $\text{C}_6\text{H}_5\text{NH}_2, \text{C}_6\text{H}_5\text{NHCH}_3, (\text{C}_2\text{H}_5)_2\text{NH}, \text{C}_2\text{H}_5\text{NH}_2$  in the decreasing order of pK<sub>b</sub>.
  - $\text{C}_2\text{H}_5\text{OH}, (\text{CH}_3)_2\text{NH}, \text{C}_2\text{H}_5\text{NH}_2$  in the increasing order of boiling point.
  - $\text{C}_6\text{H}_5\text{NH}_2, (\text{C}_2\text{H}_5)_2\text{NH}, \text{C}_2\text{H}_5\text{NH}_2$  in the increasing order of solubility in water.
- Account for the following.
  - An alkylamine is more basic than ammonia.  
Or  
Methyl amine is a stronger base than ammonia.  
Or  
Aliphatic amines are stronger bases than aromatic amines.
  - Amines react as nucleophiles.
  - Aqueous solutions of amines are basic in nature.
  - Amines are more basic than alcohols of comparable molecular masses.  
Or  
Amines are less acidic than alcohols of comparable molecular masses.
  - Reactivity of -NH<sub>2</sub> group gets reduced in acetanilide.
  - Primary amines have higher boiling points than tertiary amines
  - Aniline does not undergo Friedel Crafts reaction. Why?
  - Propanamine and N,N dimethyl amine contain the same number of carbon atoms, even though Propanamine has higher boiling point than N,N dimethylmethanamine.
- Identify A & B in each of the following reactions.
  - $\text{CH}_3\text{CONH}_2 \xrightarrow{\text{LiAlH}_4} \text{A} \quad \text{CH}_3\text{COCl} \xrightarrow{\text{B}}$
  - $\text{CH}_3\text{CH}_2\text{Cl} \xrightarrow{\text{NaCN}} \text{A} \quad \text{Ni/H}_2\text{-redn} \xrightarrow{\text{B}}$
  - $\text{C}_2\text{H}_5\text{NO}_2 \xrightarrow{\text{Sn} + \text{HCl}} \text{A} \quad \text{H}_2\text{O} \xrightarrow{\text{B}}$
  - $\text{C}_6\text{H}_5\text{NH}_2 \xrightarrow{\text{NaNO}_2/\text{HCl}} \text{A} \quad \text{C}_6\text{H}_5\text{NH}_2/\text{OH}^- \xrightarrow{\text{B}}$
  - $\text{A} \xrightarrow[\text{NaOH}]{\text{Br}_2} \text{B} \xrightarrow{\text{HNO}_2} \text{C} \xrightarrow[\text{I}_2]{\text{Red P}} \text{CH}_3\text{I}$