



Qr. In a tabular form distinguish among P, S, T amines.

Reagent or Property	Primary	Secondary	Tertiary
1. Basicity	Basic in nature	More basic than primary	More basic than secondary.
2. With Methyl iodide (CH ₃ I)	It requires three molecules of CH ₃ I to form <u>Pr. Salt</u> .	It requires two molecules of Methyl iodide to form <u>Pr. Salt</u> .	It requires Only one mole of CH ₃ I to form <u>Quaternary salt</u> .
3. Carbyl amine reaction i.e heated with Chloroform + KOH	Very bad smell is obtained.	No such	No such.
4. With HNO ₂ or NaNO ₂ + HCl (dil)	<u>Effervescence</u> of N ₂ gas and alcohol is formed.	Yellow oily liquid floato called Nitroso amine	Salt formo.

Chemical structures for the reaction with HNO₂:

$$\begin{matrix} R \\ | \\ R-N \cdot HCl \\ | \\ R \end{matrix}$$
 Salt formo.

$$\begin{matrix} R \\ | \\ R-N \cdot HNO_2 \\ | \\ R \end{matrix}$$

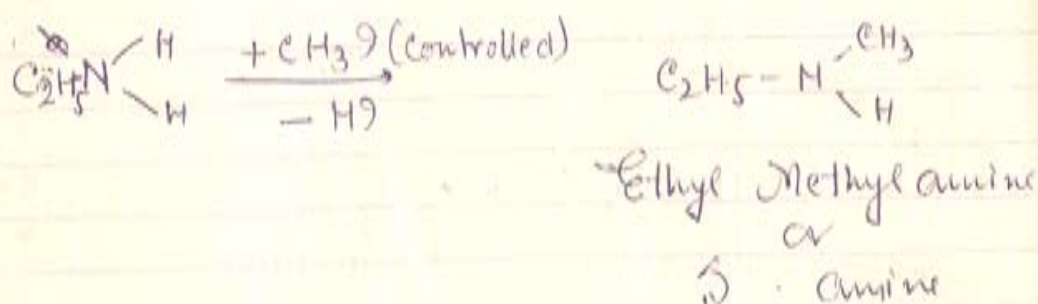
$$\begin{matrix} R \\ | \\ R-N-H \\ | \\ R \end{matrix} \quad \begin{matrix} H \\ | \\ OHNO \end{matrix}$$

$$\begin{matrix} R \\ | \\ R-N-NO \\ | \\ R \end{matrix} + H_2O$$



3. Convert Primary to Secondary Amine

When Primary amine is treated with calculated amount / required amount of methyl iodide or any alkyl halide we get a secondary amine.



Qr: You are given a mixture of three P, S, T Amine in a beaker. How would you separate each of them give the outline only.

P. S. T Amines

