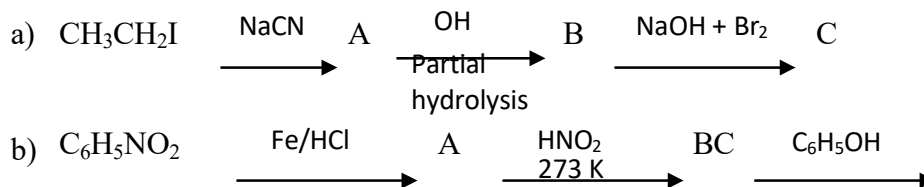




AMINES

1. Why do amines react as nucleophiles?
2. Write a chemical reaction in which the iodide ion replaces the diazonium group in a diazonium salt.
3. Give the IUPAC name of $\text{H}_2\text{N}-\text{CH}_2-\text{CH}_2\text{CH}=\text{CH}_2$
4. Why is an alkylamine more basic than ammonia?
5. Effect the following conversions:
 - a) Aniline to p-nitro aniline
 - b) Benzyl bromide to 2-Phenyl ethanamine
 - c) Acetaldehyde to ethyl amine
 - d) Nitro Benzene to Benzene
 - e) Methyl cyanide to acetone
6. Account for the following:
 - a) Diazonium salts of aromatic amines are more stable than those of aliphatic amines.
 - b) Amines are more basic than alcohols of comparable molecular masses.
7. Illustrate the following reactions giving a chemical equation in each case:
 - a) Carbylamine reaction
 - b) Coupling reaction
 - c) Gabriel-Phthalimide synthesis

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



9. **Assertion and reasoning:**

In the following questions a statement of assertion followed by a statement of reason is given. Choose the correct answer out of the following choices.

- (i) Assertion and reason both are correct and reason is correct explanation of assertion.
 - (ii) Assertion is correct statement but reason is wrong statement.
 - (iii) Assertion is wrong statement but reason is correct statement.
 - (iv) Assertion and reason both are correct statements but reason is not correct explanation of assertion.
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Q1) Assertion: Aniline cannot be prepared by Gabriel synthesis

Reason: Phthalimide cannot act as nucleophile

Q2) Assertion: Amines are basic

Reason: Nitrogen atom in amines contain lone pair of electron

Multiple choice questions:

- 1 Catalytic reduction of propanenitrile gives
(a) Propanamine (b) Propanamide (c) Propene (d) Propanal
- 2 Aniline is converted into benzene diazonium chloride in
(a) Cannizzaro reaction (b) Etard reaction (c) Gatterman –Koch reaction
(d) Diazotisation
- 3 The most basic in the following
(a) CH_3NH_2 (b) $(\text{CH})_3\text{N}$ (c) $(\text{CH})_2\text{NH}$ (d) NH_3
- 4 The colour of p-hydroxy azobenzene is
(a) Red (b) Yellow (c) Orange (d) Blue
