



CBSE NCERT Based Chapter wise Questions (2025-2026)

Class-XII

Subject: Chemistry

Total : 6 Marks (expected) [MCQ-1 × 1 Mark, VSAQ-1 × 1 Mark or 2 marks or 3 marks, LQ-5 Marks]

Chapter Name : *Amines* (Chap : 9)

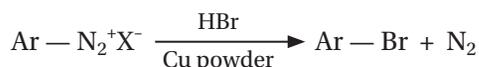
Level - 1

SECTION - A

[1 Marks MCQ]

(I) MCQ (one correct answer):

1. The correct name of the given reaction is



- (A) Hofmann bromamide degradation reaction (B) Gabriel phthalimide synthesis
(C) Carbylamine reaction (D) Gattermann reaction
2. The correct name of the given reaction is



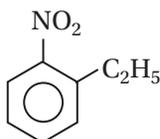
- (A) Sandmeyer's reaction (B) Gabriel phthalimide synthesis
(C) Carbylamine reaction (D) Hofmann bromamide degradation reaction
3. In which of the following solvents, the $\text{C}_4\text{H}_8\text{NH}_3^+\text{X}^-$ is soluble
- (A) ether (B) acetone (C) water (D) bromine water
4. Benzene diazonium chloride on hydrolysis gives
- (A) phenol (B) chlorobenzene (C) benzene (D) aniline
5. Which of the following would not be a good choice for reducing nitrobenzene to aniline?
- (A) LiAlH_4 (B) H_2/Ni (C) Fe and HCl (D) Sn and HCl

SECTION - B

[2 Marks]

(II) Very Short Questions:

6. Write an isomer of $\text{C}_3\text{H}_9\text{N}$ which gives foul smell of isocyanide when treated with chloroform and ethanol NaOH.
7. Write IUPAC name of the following.



8. Complete the following reaction.



(III) 2 Marks Questions:

9. Carry out the following conversions:

- (i) Nitrobenzene to aniline (ii) Aniline to phenol

Or

- (i) Write a chemical test to distinguish between dimethyl amine and ethanamine.
 (ii) Write the product formed when benzene diazonium chloride is treated with KI.

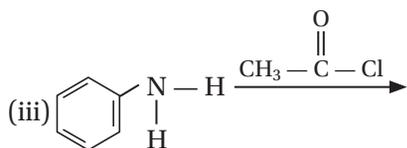
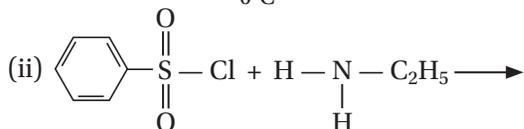
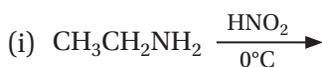
10. (i) Draw the Zwitter ion structure for sulphanilic acid.
 (ii) How can the activation effect of — NH₂ group aniline be controlled?

SECTION - D

[3 Marks]

(IV) 3 Marks Questions:

11. A compound 'X' with molecular formula C₃H₉N reacts with C₆H₅SO₂Cl to give a solid, insoluble in alkali. Identify 'X' and give the IUPAC name of the product. Write the reaction involved.
12. What happens when reactions
 (i) N-ethyl ethanamine reacts with benzene sulphonyl chloride?
 (ii) Benzyl chloride is treated with ammonia followed by the reaction with chloromethane?
 (iii) Aniline reacts with chloroform in the presence of alcoholic potassium hydroxide.
13. An organic compound (A) with molecular formula C₃H₇NO on heating with Br₂ and KOH forms a compound (B). Compound (B) on heating with CHCl₃ and alcoholic KOH produces a foul smelling compound (C) and on reacting with C₆H₅SO₂Cl forms a compound (D) which is soluble in alkali. Write the structures of (A), (B), (C) and (D).
14. (i) Give one chemical test of distinguish between the compounds of the following pairs.
 (a) CH₃NH₂ and (CH₃)₂NH
 (b) Aniline and ethanamin
 (ii) Why aniline does not undergo Friedel-Crafts reaction?
15. Write the main products of the following reactions.



SECTION - E

[3 Marks]

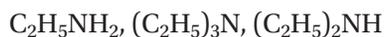
(V) 5 Marks Questions:

16. (i) An amide 'A' with molecular formula C₇H₇ON undergoes Hoffmann Bromamide degradation reaction to give amine 'B'. 'B' on treatment with nitrous acid at 273-278 K form 'C' and on treatment with chloroform and

ethanolic potassium hydroxide forms 'D'. 'C' on treatment, with ethanol gives 'E'. Identify 'A', 'B', 'C', 'D' and 'E' and write the sequence of chemical equations.

(ii)(a)(1) What is Hinsberg's reagent?

(2) Arrange the following compounds in the increasing order of their basic strength gaseous phase:



(b) Give reasons for the following:

(1) Methyl amine is more basic than aniline

(2) Aniline readily reacts with bromine with to give 2, 4, 6-tribromoaniline.

(3) Primary amines have higher boiling point than tertiary amines.

17. An organic compound with molecular formula $\text{C}_7\text{H}_7\text{NO}_2$ exists in three isomeric forms, the isomer 'A' has the highest melting point of the three. 'A' on reduction gives compound 'B' with molecular formula $\text{C}_7\text{H}_9\text{N}$. 'B' on treatment with NaNO_2/HCl at $0-5^\circ\text{C}$ to form compound 'C'.

On treating C with H_3PO_2 , it gets converted to D with formula C_7H_8 , which on further reaction with CrO_2Cl_2 followed by hydrolysis forms 'E' $\text{C}_7\text{H}_6\text{O}$. Write the structure of compounds A to E. Write the chemical equations involved.

ANSWER

1. (D)
2. (A)
3. (C)
4. (A)
5. (A)

