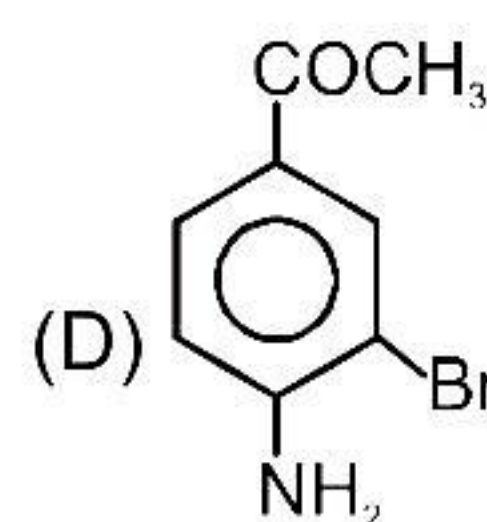
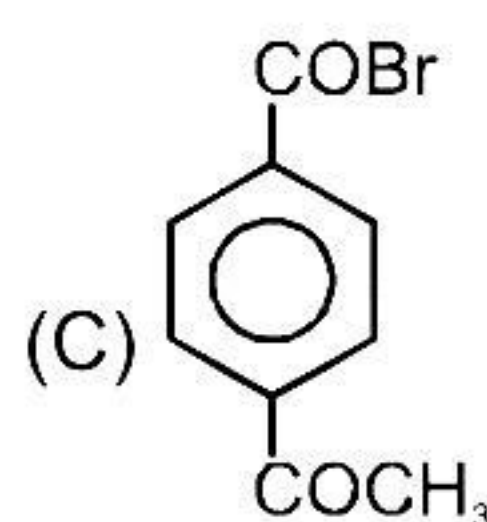
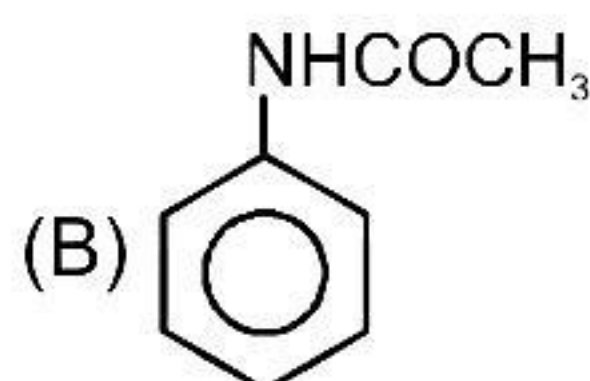
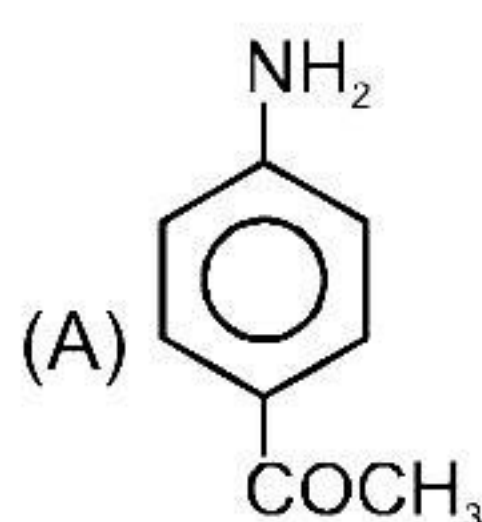
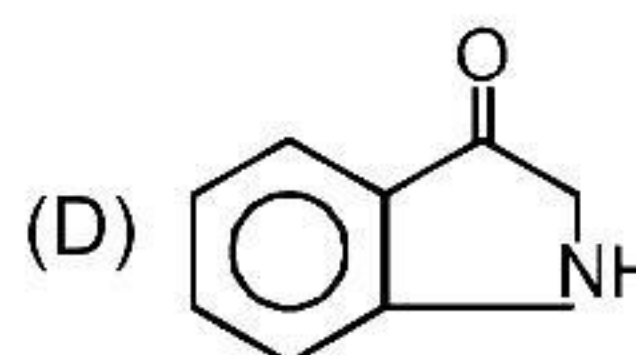
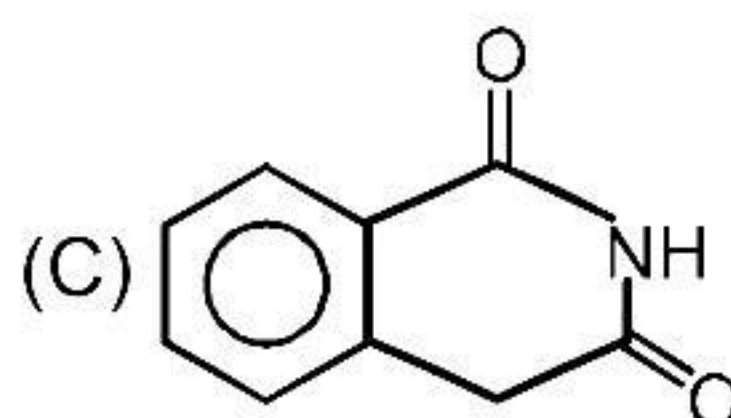
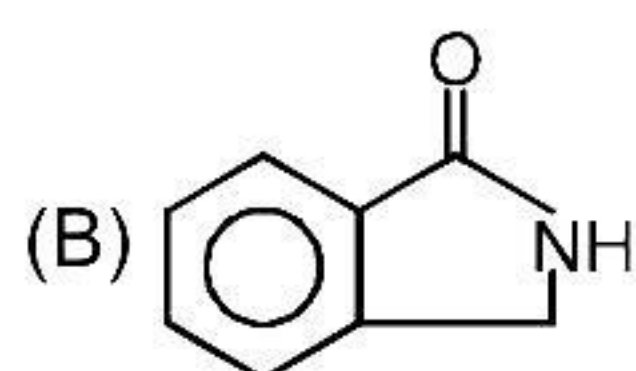
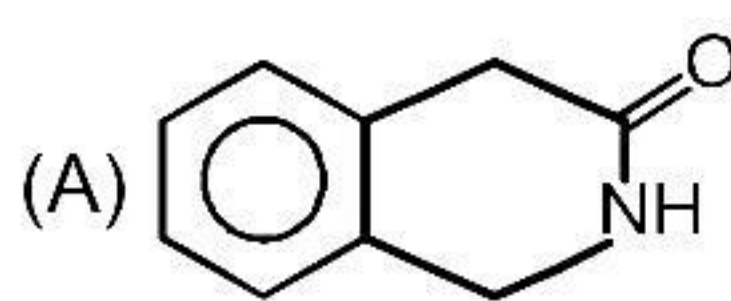
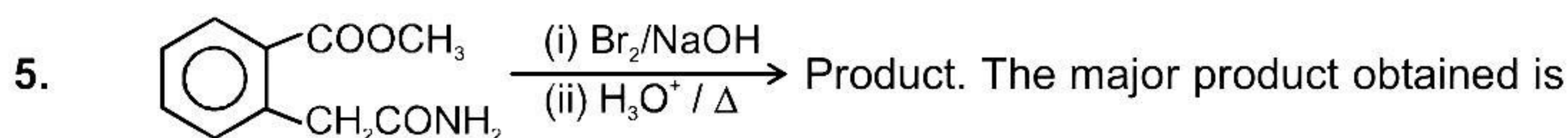


SYLLABUS : Nitrogen containing compounds

1. Which of the following sequence is best suited to convert benzene to 3-chloro aniline ?
(A) nitration, reduction, chlorination
(B) chlorination, nitration, reduction
(C) nitration, chlorination, reduction
(D) nitration, reduction, acetylation, chlorination, hydrolysis
2. Reduction of nitrobenzene with zinc and methanolic alkali gives mainly
(A) Aniline (B) p-Aminophenol (C) Azoxybenzene (D) Azobenzene

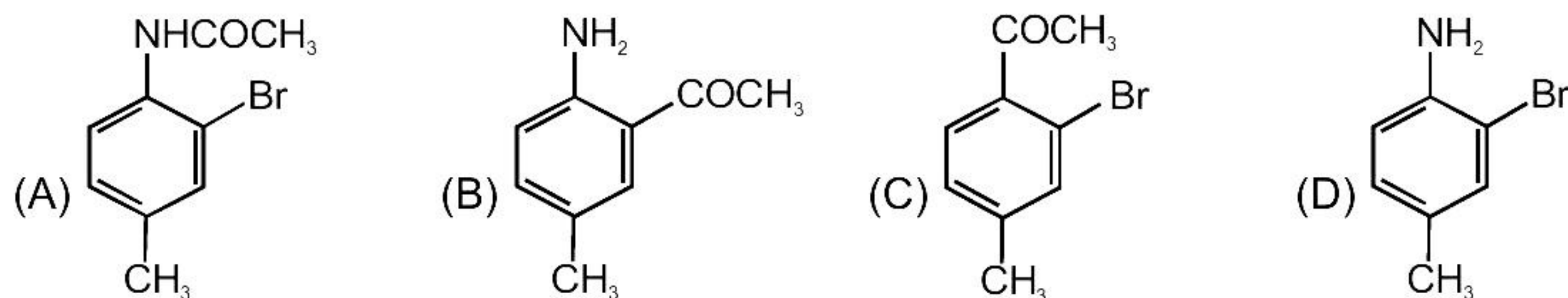
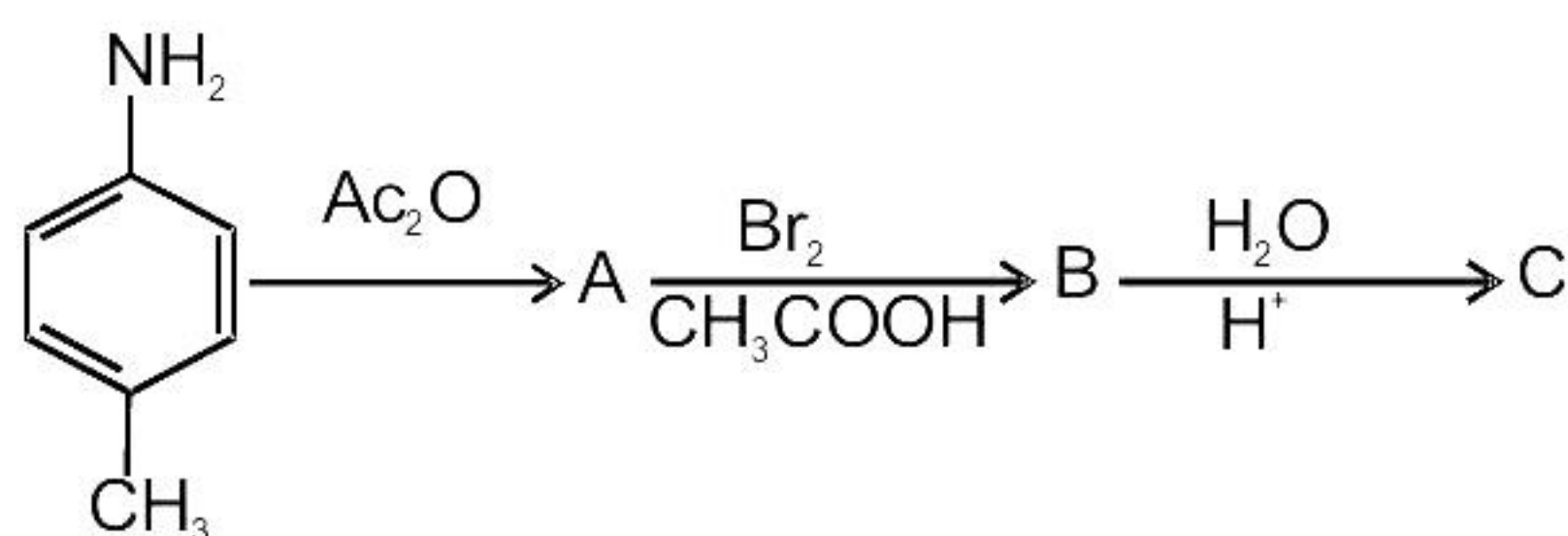


4. Aniline on treatment with bromine water yields white precipitate of :
(A) o-Bromoaniline (B) p-Bromoaniline
(C) 2, 4, 6- Tribromoaniline (D) m-Bromoaniline



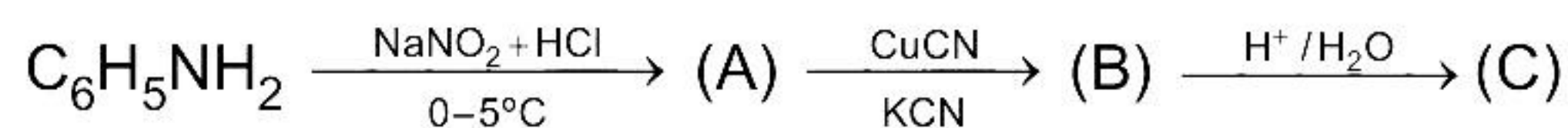
6. Aniline when treated with acetyl chloride in presence of alkali, the product formed is :
(A) acetanilide (B) benzoyl chloride
(C) acetophenone (D) aniline hydrochloride

7. The final product C, obtained in this reaction

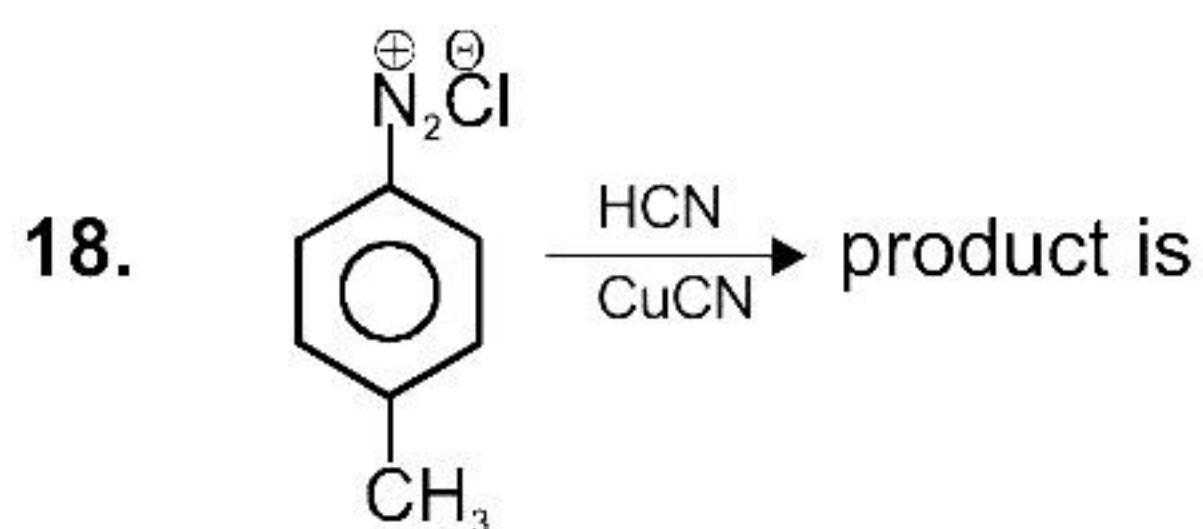


8. Chloroform when treated with aniline and alcoholic KOH, the product formed is ?
 (A) Phenyl cyanide (B) Phenyl isocyanide (C) Chlorobenzene (D) Phenol
9. An aromatic amine (X) was treated with alcoholic potash and another compound (Y) then foul smelling gas $\text{C}_6\text{H}_5\text{NC}$ is formed. The compound (Y) was formed by reacting compound (Z) with Cl_2 in the presence of slaked lime. The compound (Z) is :
 (A) CHCl_3 (B) CH_3COCH_3 (C) CH_3OH (D) $\text{C}_6\text{H}_5\text{NH}_2$
10. p-Chloro aniline and anilinium hydrogen chloride can be distinguished by
 (A) Sandmeyer reaction (B) Carbyl amine reaction
 (C) Hinsberg's reaction (D) AgNO_3
11. The best reagent for converting 2-phenylpropanamide into 2-phenylpropanamine is _____.
 (A) excess H_2
 (B) Br_2 in aqueous NaOH
 (C) iodine in the presence of red phosphorus
 (D) LiAlH_4 in ether
12. Hoffmann bromamide degradation reaction is shown by _____.
 (A) ArNH_2 (B) ArCONH_2 (C) ArNO_2 (D) ArCH_2NH_2
13. The best reagent for converting, 2-phenylpropanamide into 1-phenylethanamine is _____.
 (A) excess H_2/Pt (B) NaOH/Br_2 (C) $\text{NaBH}_4/\text{methanol}$ (D) $\text{LiAlH}_4/\text{ether}$
14. In order to prepare a 1° amine from an alkyl halide with simultaneous addition of one CH_2 group in the carbon chain, the reagent used as source of nitrogen is _____.
 (A) Sodium amide, NaNH_2 (B) Sodium azide, NaN_3
 (C) Potassium cyanide, KCN (D) Potassium phthalimide, $\text{C}_6\text{H}_4(\text{CO})_2\text{N}^-\text{K}^+$
15. Best method for preparing primary amines from alkyl halides without changing the number of carbon atoms in the chain is
 (A) Hoffmann Bromamide reaction (B) Gabriel phthalimide synthesis
 (C) Sandmeyer reaction (D) Reaction with NH_3
16. The product formed by the reaction of acetamide with Br_2 in presence of NaOH is :
 (A) CH_3CN (B) CH_3CHO (C) $\text{CH}_3\text{CH}_2\text{OH}$ (D) CH_3NH_2

17. In the reaction, the product (C) is :



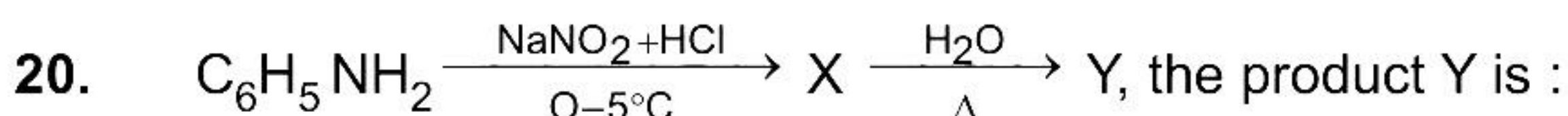
- (A) $\text{C}_6\text{H}_5\text{CH}_2\text{NH}_2$ (B) $\text{C}_6\text{H}_5\text{COOH}$ (C) $\text{C}_6\text{H}_5\text{OH}$ (D) none of these



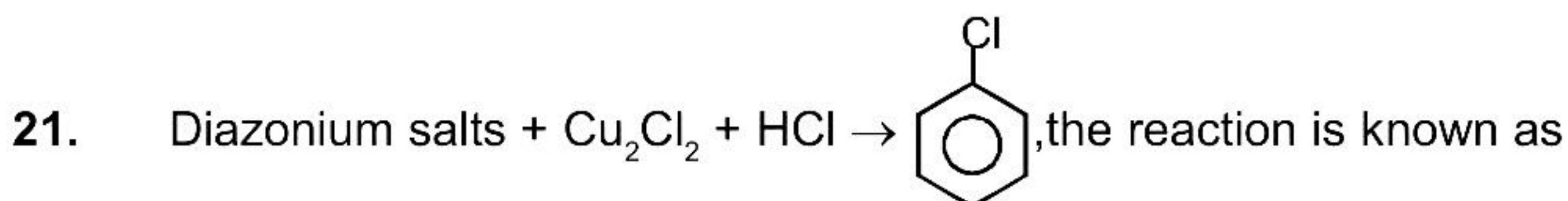
- (A)  (B)  (C)  (D) 

19. Benzenediazonium chloride can be converted into benzene on treatment with :

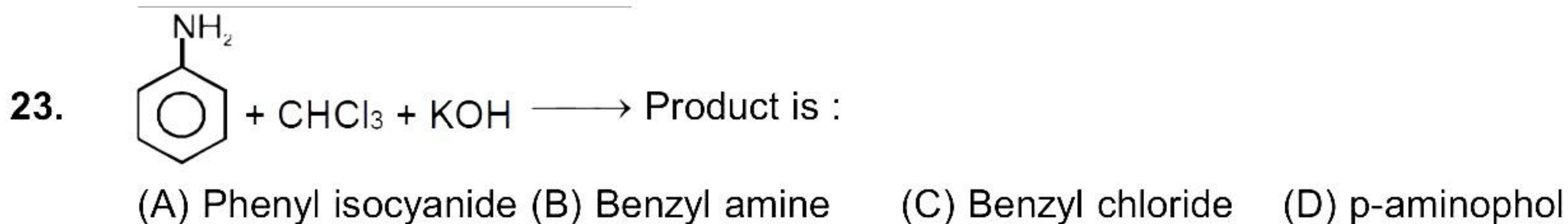
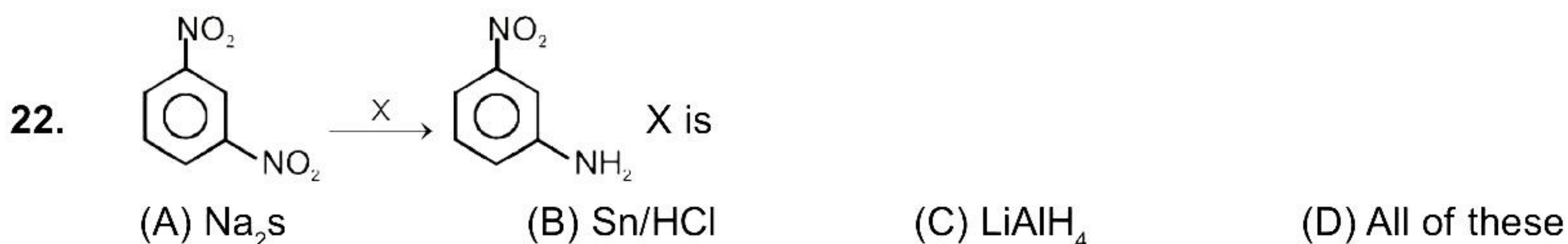
- (A) H_3PO_3 (B) H_3PO_4 (C) H_3PO_2 (D) HPO_3



- (A) Benzenediazonium chloride (B) Nitrobenzene
(C) Phenol (D) Cresol



- (A) Chlorination (B) Sandmeyer's reaction
(C) Perkin reaction (D) Carbyl amine reaction



Integer Value Questions

24. A compound with molecular mass 180 is acylated with CH_3COCl to get a compound with molecular mass 390. The number of amino groups present per molecule of the former compound is :

25. In the Hofmann bromamide degradation reaction, the number of moles of NaOH and Br_2 used per mole of amine produced are X and Y respectively then $X + Y$ is :

[Answer Key]

1.	(C)	2.	(A)	3.	(B)	4.	(C)	5.	(B)	6.	(A)	7.	(D)
8.	(B)	9.	(B)	10.	(D)	11.	(D)	12.	(B)	13.	(B)	14.	(C)
15.	(B)	16.	(D)	17.	(B)	18.	(B)	19.	(C)	20.	(C)	21.	(B)
22.	(A)	23.	(A)	24.	(5)	25.	(5)						