

PYQSide

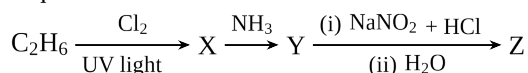
NEET AMINES — PYQS

Max. Marks: 232

Questions: 58

Section A (MCQ)

- Q.1** The major product Z formed in the following sequence of reactions is :



(X = monochlorinated product) [NEET (UG) 2026]

- (1) $\text{C}_2\text{H}_5\text{—N=N—OH}$ (2) $\text{C}_2\text{H}_5\text{OH}$
(3) $\text{C}_2\text{H}_5\text{NO}_2$ (4) $\text{C}_2\text{H}_5\text{NH}_2$

Scan or tap for the full solution



- Q.2** Select the reagents that reduce nitriles to primary amines.

- A. (i) LiAlH_4 ; (ii) H_2O B. $\text{Sn} + \text{HCl}$
C. H_2/Ni D. $\text{Na(Hg)}/\text{C}_2\text{H}_5\text{OH}$
E. $\text{Br}_2/\text{aq. NaOH}$

Choose the correct answer from the options given below. [NEET (UG) 2026]

- (1) A, B and C only (2) A, D and E only
(3) A, C and D only (4) B, D and E only

Scan or tap for the full solution



- Q.3** Given below are two statements:
In light of the above statements, choose the most appropriate answer from the options given below.

Statement-I: Oxidation of p-nitrotoluene with acidic KMnO_4 gives an acid that is stronger than benzoic acid.

Statement-II: Reduction of p-nitrotoluene with Sn/HCl followed by neutralization gives an amine that is more basic than aniline.

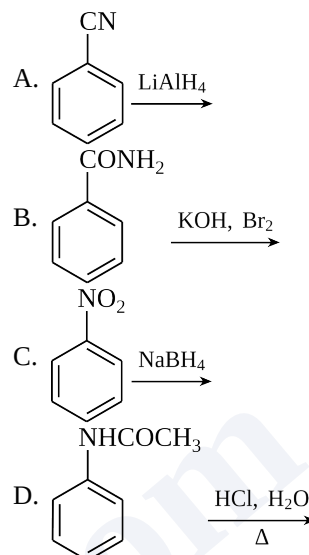
[RE-NEET (UG) 2026]

- (1) Statement-I is incorrect but Statement-II is correct
(2) Both Statement-I and Statement-II are correct
(3) Both Statement-I and Statement-II are incorrect
(4) Statement-I is correct but Statement-II is incorrect

Scan or tap for the full solution



- Q.4** Identify the reactions which give aniline as the major product.



Choose the correct answer from the options given below. [RE-NEET (UG) 2026]

- (1) C and D only (2) A and B only
(3) B and D only (4) A and C only

Scan or tap for the full solution



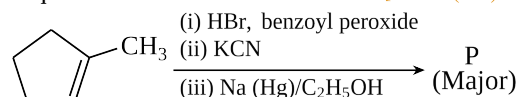
- Q.5** The correct order of decreasing basic strength of the given amines is: [NEET (UG) 2025]

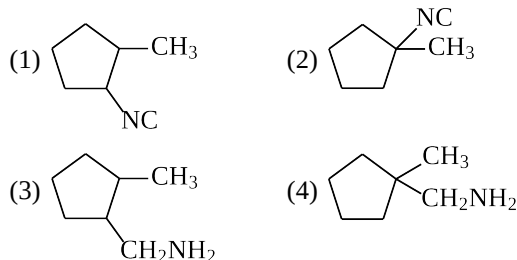
- (1) N-ethylethanamine > ethanamine > N-methylaniline > benzenamine
(2) benzenamine > ethanamine > N-methylaniline > N-ethylethanamine
(3) N-methylaniline > benzenamine > ethanamine > N-ethylethanamine
(4) N-ethylethanamine > ethanamine > benzenamine > N-methylaniline

Scan or tap for the full solution



- Q.6** Predict the major product 'P' in the following sequence of reactions- [NEET (UG) 2025]





Scan or tap for the full solution

Q.7 Given below are two statements :

Statement-I: Benzenediazonium salt is prepared by the reaction of aniline with nitrous acid at 273–278 K. It decomposes easily in the dry state.

Statement-II: Insertion of iodine into the benzene ring is difficult and hence iodobenzene is prepared through the reaction of benzenediazonium salt with KI.

In the light of the above statements, choose the most appropriate answer from the options given below:

[NEET (UG) 2025]

- (1) Statement-I is correct but Statement-II is incorrect
- (2) Statement-I is incorrect but Statement-II is correct
- (3) Both Statement-I and Statement-II are correct
- (4) Both Statement-I and Statement-II are incorrect

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Q.8 Given below are two statements:

Statement-I: Aniline does not undergo Friedel-Crafts alkylation reaction.

Statement-II: Aniline cannot be prepared through Gabriel synthesis.

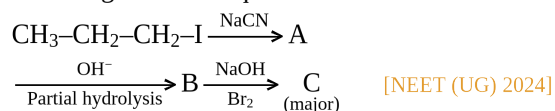
In the light of the above statements, choose the correct answer from the options given below:

[NEET (UG) 2024]

- (1) Both statement I and Statement-II are true
- (2) Both Statement-I and Statement-II are false
- (3) Statement-I is correct but Statement-II is false
- (4) Statement-I is incorrect but Statement-II is true

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Q.9 Identify the major product C formed in the following reaction sequence :



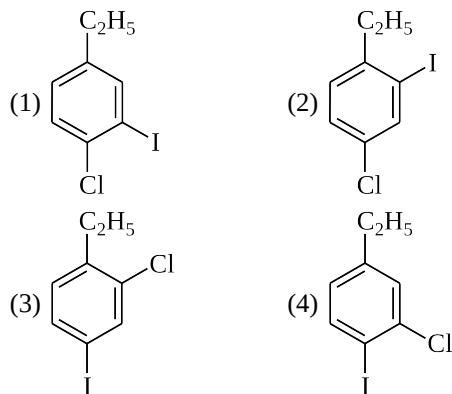
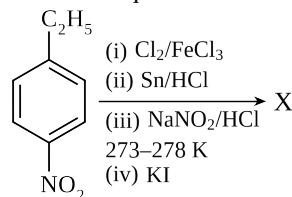
[NEET (UG) 2024]

- (1) propylamine
- (2) butylamine
- (3) butanamide
- (4) α -bromobutanoic acid

Scan or tap for the full solution

Q.10 The major product X formed in the following reaction sequence is :

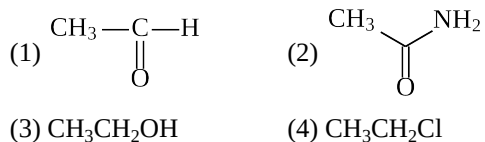
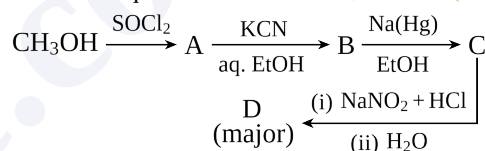
[RE-NEET (UG) 2024]



Scan or tap for the full solution

Q.11 The major product D formed in the following reaction sequence is :

[RE-NEET (UG) 2024]



Scan or tap for the full solution

Q.12 The compound that does not undergo Friedel-Crafts alkylation reaction but gives a positive carbylamine test is :

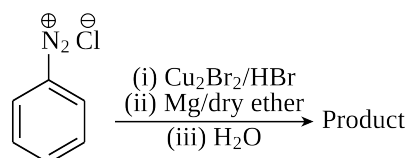
[RE-NEET (UG) 2024]

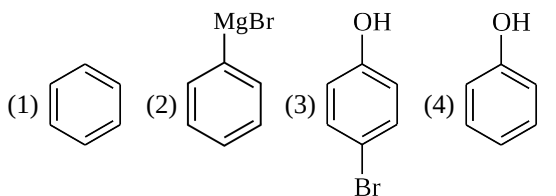
- (1) Aniline
- (2) Pyridine
- (3) N-methylaniline
- (4) Triethylamine

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Q.13 Identify the product in the following reaction:

[NEET (UG) 2023]

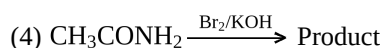
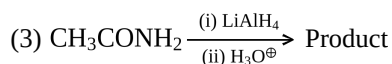
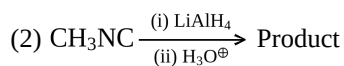
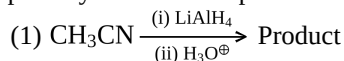




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Q.14 Which of the following reactions will NOT give primary amine as the product? [NEET (UG) 2023]



Scan or tap for the full solution



Q.15 Given below are two statements

Statement-I: Primary aliphatic amines react with HNO_2 to give unstable diazonium salts.

Statement-II: Primary aromatic amines react with HNO_2 to form diazonium salts which are stable even above 300 K.

In the light of the above statements, choose the most appropriate answer from the options given below.

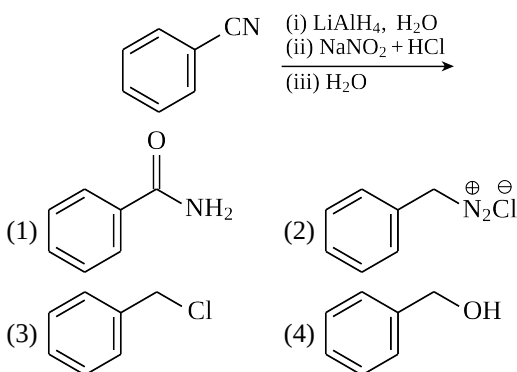
[NEET (UG) 2022]

- (1) Both Statement-I and Statement-II are correct.
- (2) Both Statement-I and Statement-II are incorrect.
- (3) Statement-I is correct but Statement-II is incorrect.
- (4) Statement-I is incorrect but Statement-II is correct.

Scan or tap for the full solution



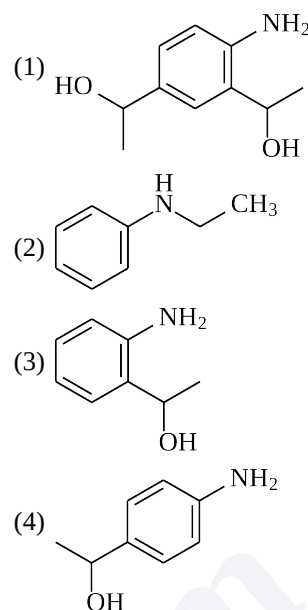
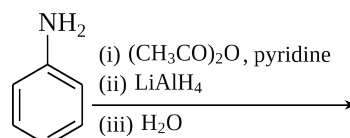
Q.16 The product formed from the following reaction sequence is [NEET (UG) 2022]



Scan or tap for the full solution



Q.17 The product formed from the following reaction sequence is : [NEET (UG) 2022 (Phase 2)]



Scan or tap for the full solution



Q.18 Match List-I with List-II :

List-I (Reaction)		List-II (Product formed)	
a.	Gabriel synthesis	i.	Benzaldehyde
b.	Kolbe synthesis	ii.	Ethers
c.	Williamson synthesis	iii.	Primary amines
d.	Etard reaction	iv.	Salicylic acid

Choose the correct answer from the options given below :

[NEET (UG) 2022 (Phase 2)]

- (1) (a)-(iii), (b)-(iv), (c)-(ii), (d)-(i)
- (2) (a)-(iii), (b)-(i), (c)-(ii), (d)-(iv)
- (3) (a)-(ii), (b)-(iii), (c)-(i), (d)-(iv)
- (4) (a)-(iv), (b)-(iii), (c)-(i), (d)-(ii)

Scan or tap for the full solution



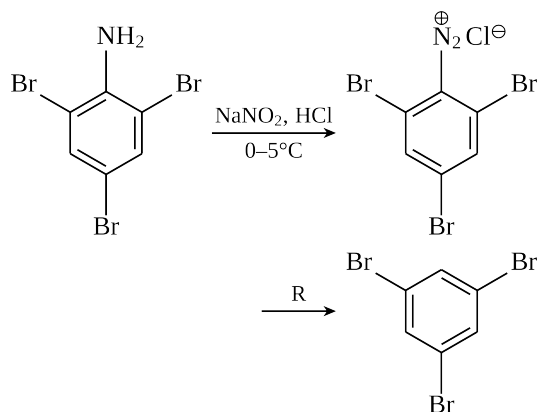
Q.19 Identify the compound that will react with Hinsberg's reagent to give a solid which dissolves in alkali. [NEET (UG) 2021]

- (1)
- (2)
- (3)
- (4)

Scan or tap for the full solution



Q.20 The reagent 'R' in the given sequence of chemical reaction is : [NEET (UG) 2021]



- (1) CuCN/KCN (2) H₂O
(3) CH₃CH₂OH (4) HI

Scan or tap for the full solution



Q.21 Which of the following amine will give the carbylamine test? [NEET (UG) 2020]

- (1)
- (2)
- (3)
- (4)

Scan or tap for the full solution



Q.22 The correct order of the basic strength of methyl substituted amines in aqueous solution is : [NEET (UG) 2019]

- (1) (CH₃)₃N > (CH₃)₂NH > CH₃NH₂
(2) CH₃NH₂ > (CH₃)₂NH > (CH₃)₃N
(3) (CH₃)₂NH > CH₃NH₂ > (CH₃)₃N
(4) (CH₃)₃N > CH₃NH₂ > (CH₃)₂NH

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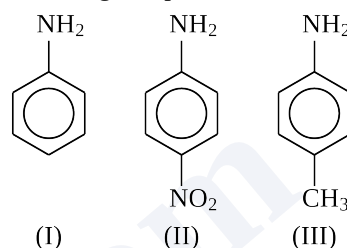
Q.23 Nitration of aniline in strong acidic medium also gives m-nitroaniline because [NEET 2018]

- (1) in spite of substituents nitro group always goes to only m-position
(2) in electrophilic substitution reactions amino group is meta directive
(3) in absence of substituents nitro group always goes to m-position
(4) in acidic (strong) medium aniline is present as anilinium ion

Scan or tap for the full solution



Q.24 The correct increasing order of basic strength for the following compounds is [NEET 2017]



- (1) III < I < II (2) III < II < I
(3) II < I < III (4) II < III < I

Scan or tap for the full solution



Q.25 Which of the following reactions is appropriate for converting acetamide to methanamine? [NEET 2017]

- (1) Hoffmann hypobromamide reaction
(2) Stephen's reaction
(3) Gabriel phthalimide synthesis
(4) Carbylamine reaction

Scan or tap for the full solution



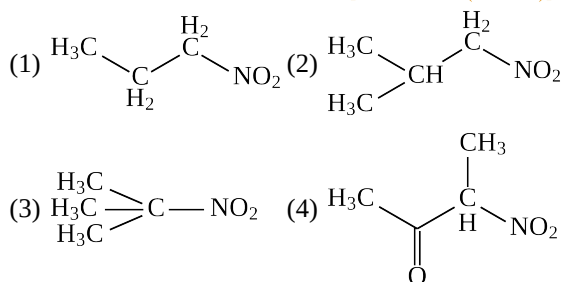
Q.26 The correct statement regarding the basicity of arylamines is [NEET 2016 (Phase 1)]

- (1) arylamines are generally more basic than alkylamines because of aryl group
(2) arylamines are generally more basic than alkylamines, because the nitrogen atom in arylamines is sp-hybridised
(3) arylamines are generally less basic than alkylamines because the nitrogen lone-pair electrons are delocalised by interaction with the aromatic ring π-electron system
(4) arylamines are generally more basic than alkylamines because the nitrogen lone-pair electrons are not delocalised by interaction with the aromatic ring π-electron system.

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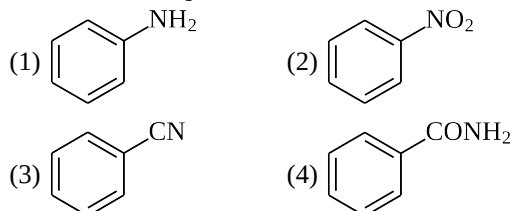
Q.27 Which one of the following nitro-compounds does not react with nitrous acid? [NEET 2016 (Phase 2)]



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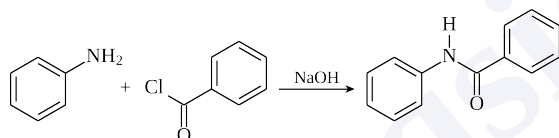
Q.28 A given nitrogen-containing aromatic compound 'A' reacts with Sn/HCl, followed by HNO₂ to give an unstable compound 'B'. 'B', on treatment with phenol, forms a beautiful coloured compound 'C' with the molecular formula C₁₂H₁₀N₂O. The structure of compound 'A' is [NEET 2016 (Phase 2)]



Scan or tap for the full solution



Q.29 The following reaction



is known by the name

[AIPMT 2015]

- (1) Perkin's reaction
- (2) Acetylation reaction
- (3) Schotten-Baumann reaction
- (4) Friedel-Craft's reaction

Scan or tap for the full solution



Q.30 Method by which aniline cannot be prepared is

[AIPMT 2015]

- (1) degradation of benzamide with bromine in alkaline solution
- (2) reduction of nitrobenzene with H₂/Pd in ethanol
- (3) potassium salt of phthalimide treated with chlorobenzene followed by hydrolysis with aqueous NaOH solution
- (4) hydrolysis of phenylisocyanide with acidic solution.

Scan or tap for the full solution



Q.31 The electrolytic reduction of nitrobenzene in strongly acidic medium produces

[AIPMT 2015 (Cancelled)]

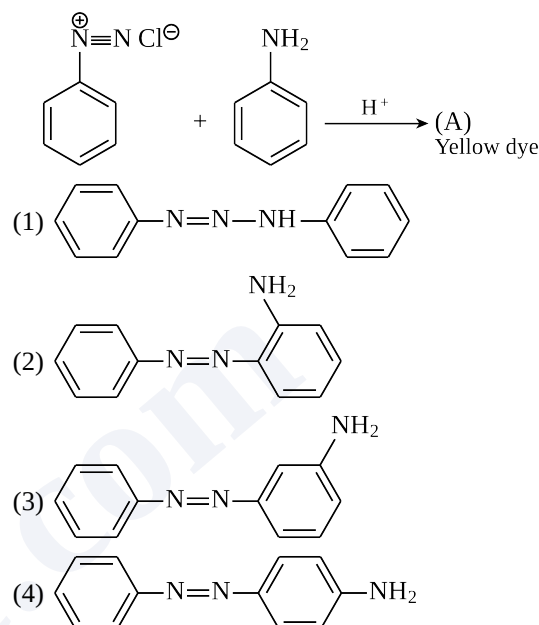
- (1) azobenzene
- (2) aniline
- (3) p-aminophenol
- (4) azoxybenzene.

Scan or tap for the full solution



Q.32 In the following reaction, the product (A) is

[AIPMT 2014]



Scan or tap for the full solution



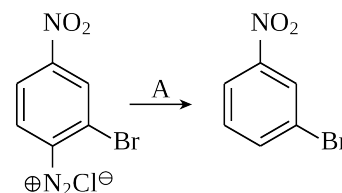
Q.33 Which of the following will be most stable diazonium salt RN₂⁺X⁻? [AIPMT 2014]

- (1) CH₃N₂⁺X⁻
- (2) C₆H₅N₂⁺X⁻
- (3) CH₃CH₂N₂⁺X⁻
- (4) C₆H₅CH₂N₂⁺X⁻

Scan or tap for the full solution



Q.34 In the reaction



A is

[NEET 2013]

- (1) H₃PO₂ and H₂O
- (2) H⁺/H₂O
- (3) HgSO₄/H₂SO₄
- (4) Cu₂Cl₂

Scan or tap for the full solution



Q.35 On hydrolysis of a "compound", two compounds are obtained. One of which on treatment with sodium nitrite and hydrochloric acid gives a product which does not respond to iodoform test. The second one reduces Tollens reagent and Fehling's solution. The "compound" is

[NEET 2013 (Karnataka)]

- (1) $\text{CH}_3\text{CH}_2\text{CH}_2\text{NC}$
- (2) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CN}$
- (3) $\text{CH}_3\text{CH}_2\text{CH}_2\text{ON}=\text{O}$
- (4) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CON}(\text{CH}_3)_2$

Scan or tap for the full solution



Q.36 Some reactions of amines are given. Which one is not correct?

[NEET 2013 (Karnataka)]

- (1) $(\text{CH}_3)_2\text{N}-\text{C}_6\text{H}_5 + \text{NaNO}_2 + \text{HCl} \longrightarrow (\text{CH}_3)_2\text{N}-\text{C}_6\text{H}_5-\text{N}^+\equiv\text{N}^-$
- (2) $\text{CH}_3\text{CH}_2\text{NH}_2 + \text{HNO}_2 \longrightarrow \text{CH}_3\text{CH}_2\text{OH} + \text{N}_2$
- (3) $\text{CH}_3\text{NH}_2 + \text{C}_6\text{H}_5\text{SO}_2\text{Cl} \longrightarrow \text{CH}_3\text{NHSO}_2\text{C}_6\text{H}_5$
- (4) $(\text{CH}_3)_2\text{NH} + \text{NaNO}_2 + \text{HCl} \longrightarrow (\text{CH}_3)_2\text{N}-\text{N}=\text{O}$

Scan or tap for the full solution



Q.37 An organic compound ($\text{C}_3\text{H}_9\text{N}$) (A), when treated with nitrous acid, gave an alcohol and N_2 gas was evolved. (A) on warming with CHCl_3 and caustic potash gave (C) which on reduction gave isopropylmethylamine. Predict the structure of (A)

[AIPMT 2012 (Mains)]

- (1) $\begin{array}{c} \text{H}_3\text{C} \\ | \\ \text{H}_3\text{C}-\text{CH}-\text{NH}_2 \end{array}$
- (2) $\text{CH}_3\text{CH}_2-\text{NH}-\text{CH}_3$
- (3) $\begin{array}{c} \text{CH}_3 \\ | \\ \text{CH}_3-\text{N}-\text{CH}_3 \end{array}$
- (4) $\text{CH}_3\text{CH}_2\text{CH}_2-\text{NH}_2$

Scan or tap for the full solution



Q.38 An organic compound A on treatment with NH_3 gives B, which on heating gives C. C when treated with Br_2 in the presence of KOH produces ethyl amine. Compound A is

[AIPMT 2011 (Mains)]

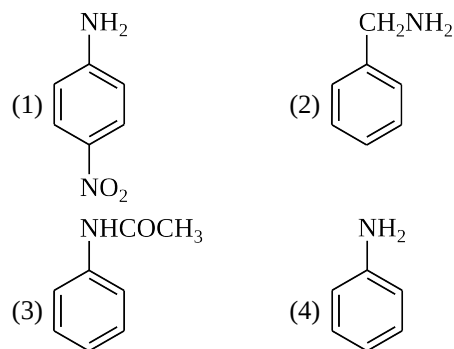
- (1) CH_3COOH
- (2) $\text{CH}_3\text{CH}_2\text{CH}_2\text{COOH}$
- (3) $\begin{array}{c} \text{CH}_3 \\ | \\ \text{CH}_3-\text{CH}-\text{COOH} \end{array}$
- (4) $\text{CH}_3\text{CH}_2\text{COOH}$

Scan or tap for the full solution



Q.39 Which of the following compounds is most basic?

[AIPMT 2011 (Mains)]

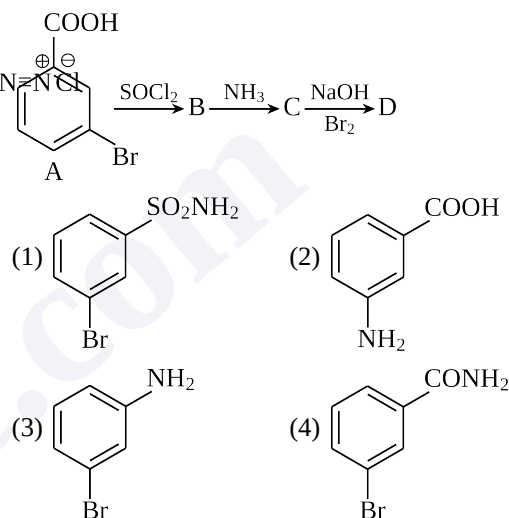


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Q.40 In a set of reactions m-bromobenzoic acid gave a product D. Identify the product D.

[AIPMT 2011 (Prelims)]

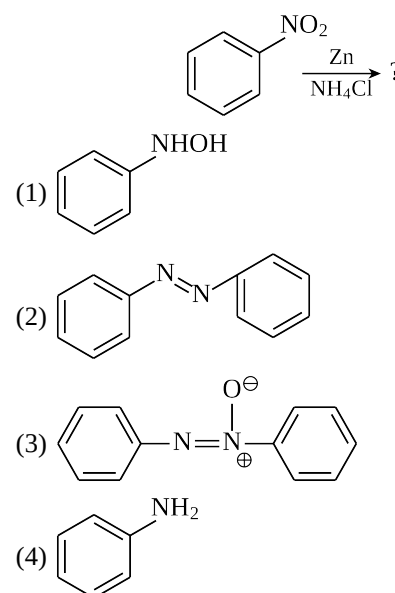


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Q.41 What is the product obtained in the following reaction?

[AIPMT 2011 (Prelims)]



Scan or tap for the full solution



Q.42 Match the compounds given in **List-I** with their characteristic reactions given in **List-II**.

List-I (Compounds)		List-II (Reactions)	
A.	$\text{CH}_3(\text{CH}_2)_3\text{NH}_2$	i.	Alkaline hydrolysis
B.	$\text{CH}_3\text{C}\equiv\text{CH}$	ii.	With KOH (alcohol) and CHCl_3 produces bad smell
C.	$\text{CH}_3\text{CH}_2\text{COOCH}_3$	iii.	Gives white ppt. with ammoniacal AgNO_3
D.	$\text{CH}_3\text{CH}(\text{OH})\text{CH}_3$	iv.	With Lucas reagent cloudiness appears after 5 minutes

Select the correct option. [AIPMT 2010 (Mains)]

- (1) A-(ii), B-(i), C-(iv), D-(iii)
 (2) A-(iii), B-(ii), C-(i), D-(iv)
 (3) A-(ii), B-(iii), C-(i), D-(iv)
 (4) A-(iv), B-(ii), C-(iii), D-(i)

Scan or tap for the full solution



Q.43 Acetamide is treated with the following reagents separately. Which one of these would yield methyl amine? [AIPMT 2010 (Prelims)]

- (1) NaOH/Br_2 (2) Sodalime
 (3) Hot conc. H_2SO_4 (4) PCl_5

Scan or tap for the full solution



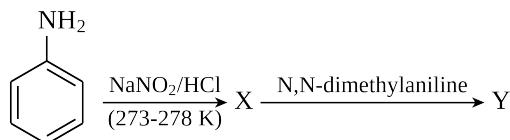
Q.44 Which of the following statements about primary amines is false? [AIPMT 2010 (Prelims)]

- (1) Alkyl amines are stronger bases than aryl amines.
 (2) Alkyl amines react with nitrous acid to produce alcohols.
 (3) Aryl amines react with nitrous acid to produce phenols.
 (4) Alkyl amines are stronger bases than ammonia.

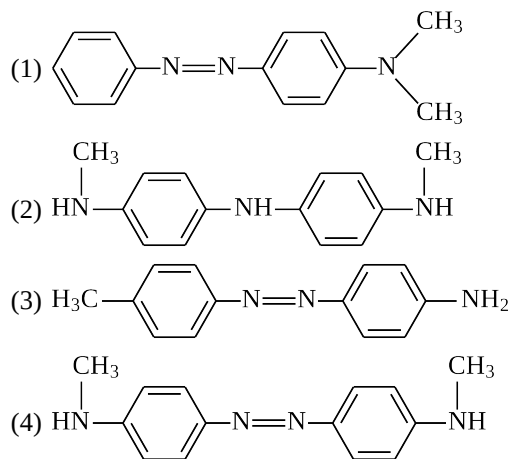
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Q.45 Aniline in a set of the following reactions yielded a coloured product Y.



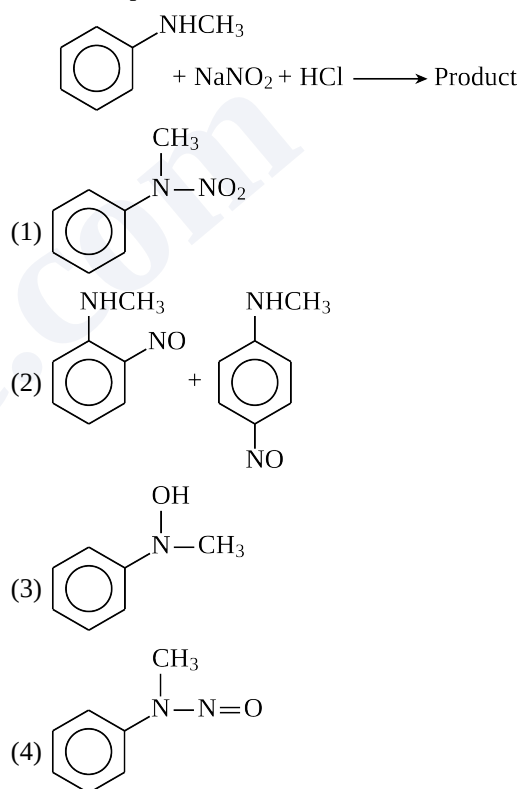
The structure of 'Y' would be [AIPMT 2010 (Prelims)]



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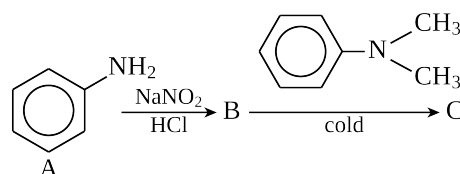
Q.46 Predict the product. [AIPMT 2009]



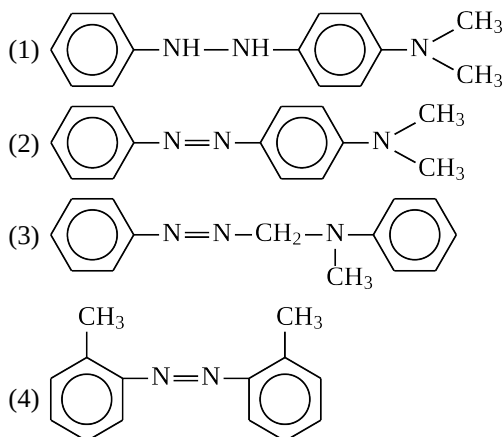
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Q.47 In a reaction of aniline a coloured product C was obtained.



The structure of C would be [AIPMT 2008]



Scan or tap for the full solution



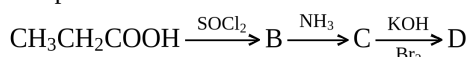
Q.48 Which one of the following on reduction with lithium aluminium hydride yields a secondary amine? [AIPMT 2007]

- (1) Methyl isocyanide (2) Acetamide
(3) Methyl cyanide (4) Nitroethane

Scan or tap for the full solution



Q.49 In a set of reactions propionic acid yielded a compound D.



The structure of D would be [AIPMT 2006]

- (1) $\text{CH}_3\text{CH}_2\text{NH}_2$ (2) $\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$
(3) $\text{CH}_3\text{CH}_2\text{CONH}_2$ (4) $\text{CH}_3\text{CH}_2\text{NHCH}_3$

Scan or tap for the full solution



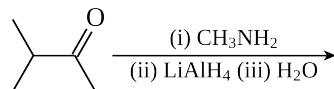
Q.50 Which of the following is more basic than aniline? [AIPMT 2006]

- (1) Benzylamine (2) Diphenylamine
(3) Triphenylamine (4) p-Nitroaniline

Scan or tap for the full solution



Q.51 The major organic product formed from the following reaction :



is

- (1)
- (2)
- (3)
- (4)

Scan or tap for the full solution



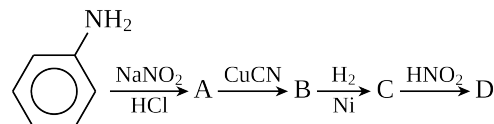
Q.52 Electrolytic reduction of nitrobenzene in weakly acidic medium gives [AIPMT 2005]

- (1) N-phenylhydroxylamine
(2) nitrosobenzene
(3) aniline
(4) p-hydroxyaniline

Scan or tap for the full solution



Q.53 Aniline in a set of reactions yielded a product D.



The structure of the product D would be

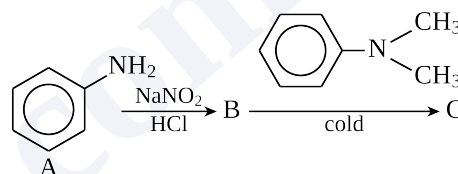
[AIPMT 2005]

- (1) $\text{C}_6\text{H}_5\text{NHOH}$ (2) $\text{C}_6\text{H}_5\text{NHCH}_2\text{CH}_3$
(3) $\text{C}_6\text{H}_5\text{CH}_2\text{NH}_2$ (4) $\text{C}_6\text{H}_5\text{CH}_2\text{OH}$

Scan or tap for the full solution



Q.54 In a reaction of aniline a coloured product C was obtained.



The structure of C would be

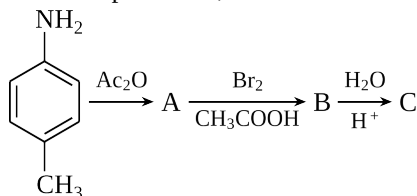
[AIPMT 2004]

- (1)
- (2)
- (3)
- (4)

Scan or tap for the full solution

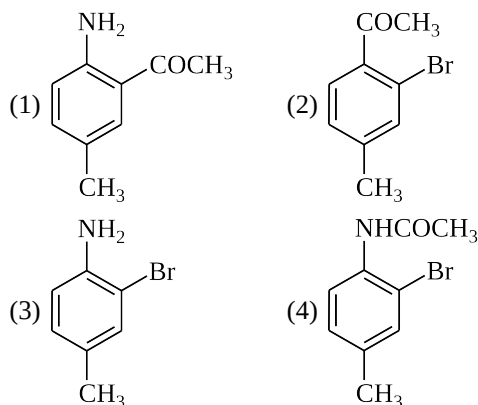


Q.55 The final product C, obtained in this reaction



would be

[AIPMT 2003]



Scan or tap for the full solution



- Q.56** $\text{CH}_3\text{CH}_2\text{Cl} \xrightarrow{\text{NaCN}} \text{X} \xrightarrow{\text{Ni/H}_2} \text{Y} \xrightarrow{\text{acetic anhydride}} \text{Z}$
 Z in the above reaction sequence is [AIPMT 2002]
- (1) $\text{CH}_3\text{CH}_2\text{CH}_2\text{NHCOCH}_3$
 - (2) $\text{CH}_3\text{CH}_2\text{CH}_2\text{NH}_2$
 - (3) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CONHCH}_3$
 - (4) $\text{CH}_3\text{CH}_2\text{CH}_2\text{CONHCOCH}_3$

Scan or tap for the full solution



- Q.57** Intermediates formed during reaction of with Br_2 and KOH are [AIPMT 2001]

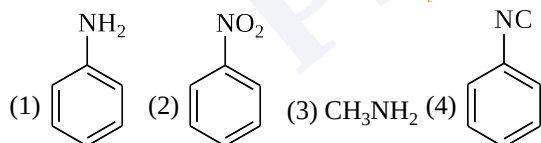


- (1) RCONHBr and RNCO
- (2) RNHCOBr and RNCO
- (3) RNH-Br and RCONHBr
- (4) RCONBr_2

Scan or tap for the full solution



- Q.58** $\text{A} \xrightarrow{\text{reduction}} \text{B} \xrightarrow{\text{CHCl}_3/\text{KOH}} \text{C} \xrightarrow{\text{reduction}} \text{N-methylaniline}$
 then A is [AIPMT 2000]



Scan or tap for the full solution



ANSWER KEY

Ques.	1	2	3	4	5	6	7	8	9	10	11
Ans.	2	3	2	3	1	3	3	1	1	3	3
Ques.	12	13	14	15	16	17	18	19	20	21	22
Ans.	1	1	2	3	4	2	1	3	3	4	3
Ques.	23	24	25	26	27	28	29	30	31	32	33
Ans.	4	3	1	3	3	2	3	3	3	4	2
Ques.	34	35	36	37	38	39	40	41	42	43	44
Ans.	1	1	1	1	4	2	3	1	3	1	3
Ques.	45	46	47	48	49	50	51	52	53	54	55
Ans.	1	4	2	1	1	1	2	3	4	2	3