

PYQSide

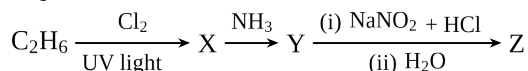
NEET AMINES — CHEMICAL REACTIONS OF AMINES — PYQS

Max. Marks: 80

Questions: 20

Section A (MCQ)

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



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

- (1) $\text{C}_2\text{H}_5\text{N}=\text{N}-\text{OH}$ (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** 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:

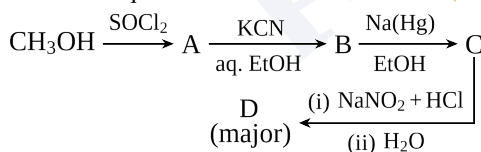
[NEET (UG) 2024]

- (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

Scan or tap for the full solution



- Q.3** The major product D formed in the following reaction sequence is : [RE-NEET (UG) 2024]



- (1) $\text{CH}_3-\text{C}(=\text{O})-\text{H}$ (2) $\text{CH}_3-\text{C}(=\text{O})-\text{NH}_2$
(3) $\text{CH}_3\text{CH}_2\text{OH}$ (4) $\text{CH}_3\text{CH}_2\text{Cl}$

Scan or tap for the full solution



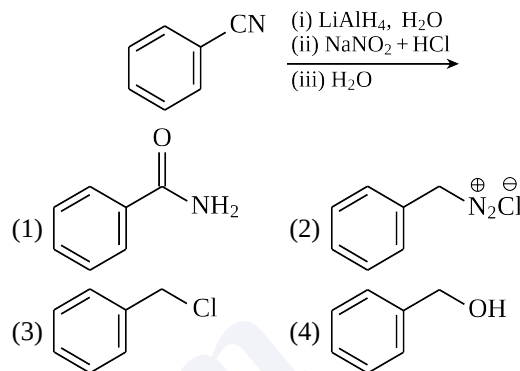
- Q.4** The compound that does not undergo Friedel-Crafts alkylation reaction but gives a positive carbylamine test is : [RE-NEET (UG) 2024]

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

Scan or tap for the full solution



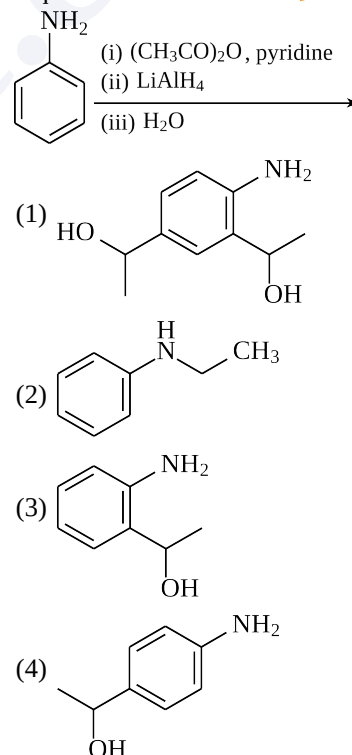
- Q.5** The product formed from the following reaction sequence is [NEET (UG) 2022]



Scan or tap for the full solution



- Q.6** The product formed from the following reaction sequence is : [NEET (UG) 2022 (Phase 2)]



Scan or tap for the full solution



- Q.7** Identify the compound that will react with Hinsberg's reagent to give a solid which dissolves in alkali. [NEET (UG) 2021]

- (1) $\text{H}_3\text{C}-\text{CH}_2-\text{NO}_2$
 (2) $\text{H}_3\text{C}-\text{CH}_2-\ddot{\text{N}}\text{H}-\text{CH}_3$
 (3) $\text{H}_3\text{C}-\text{CH}_2-\ddot{\text{N}}\text{H}_2$
 (4) $\text{H}_3\text{C}-\text{CH}_2-\ddot{\text{N}}(\text{CH}_3)-\text{CH}_2-\text{CH}_3$

Scan or tap for the full solution



Q.8 Which of the following amine will give the carbylamine test? [NEET (UG) 2020]

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

Scan or tap for the full solution



Q.9 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



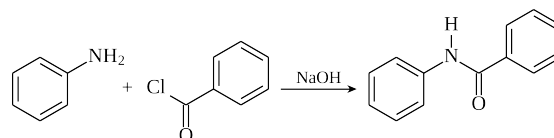
Q.10 Which one of the following nitro-compounds does not react with nitrous acid? [NEET 2016 (Phase 2)]

- (1) $\text{H}_3\text{C}-\text{CH}_2-\text{CH}_2-\text{NO}_2$ (2) $\text{H}_3\text{C}-\text{CH}=\text{CH}-\text{NO}_2$
 (3) $\text{H}_3\text{C}-\text{C}(\text{CH}_3)_2-\text{NO}_2$ (4) $\text{H}_3\text{C}-\text{C}(=\text{O})-\text{CH}_2-\text{NO}_2$

Scan or tap for the full solution



Q.11 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.12 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.13 Some reactions of amines are given. Which one is not correct? [NEET 2013 (Karnataka)]

- (1) $(\text{CH}_3)_2\text{N}-\text{C}_6\text{H}_5 + \text{NaNO}_2 + \text{HCl} \longrightarrow (\text{CH}_3)_2\text{N}-\text{C}_6\text{H}_5$
 (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.14 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) $\text{H}_3\text{C}-\text{CH}(\text{CH}_3)-\text{NH}_2$ (2) $\text{CH}_3\text{CH}_2-\text{NH}-\text{CH}_3$
 (3) $\text{CH}_3-\text{N}(\text{CH}_3)_2$ (4) $\text{CH}_3\text{CH}_2\text{CH}_2-\text{NH}_2$

Scan or tap for the full solution



Q.15 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

List-I (Compounds)		List-II (Reactions)	
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.16 Which of the following statements about primary amines is false?

[AIPMT 2010 (Prelims)]

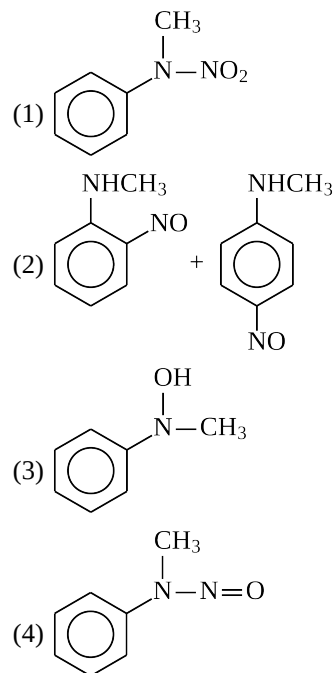
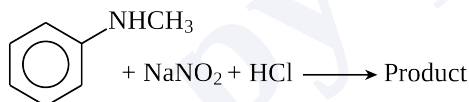
- (1) Alkyl amines are stronger bases than aryl amines.
 (2) Alkyl amines react with nitrous acid to produce alcohols.
 (3) Aryl amines react with nitrous acid to produce phenols.
 (4) Alkyl amines are stronger bases than ammonia.

Scan or tap for the full solution



Q.17 Predict the product.

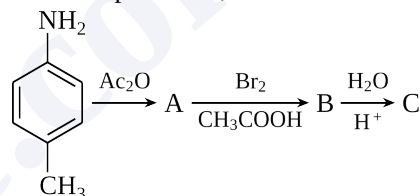
[AIPMT 2009]



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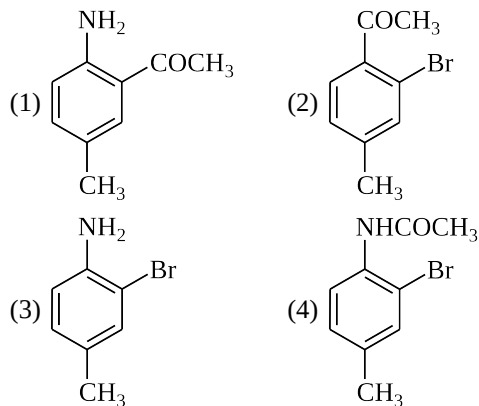


Q.18 The final product C, obtained in this reaction



would be

[AIPMT 2003]



Scan or tap for the full solution



Q.19 $\text{CH}_3\text{CH}_2\text{CH}_2\text{Cl} \xrightarrow{\text{NaCN}} \text{X} \xrightarrow{\text{Ni}/\text{H}_2} \text{Y} \xrightarrow{\text{acetic anhydride}} \text{Z}$

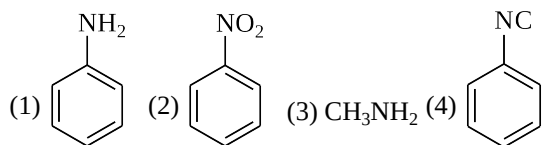
Z in the above reaction sequence is [AIPMT 2002]

- (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.20 $\text{A} \xrightarrow{\text{reduction}} \text{B} \xrightarrow{\text{CHCl}_3/\text{KOH}} \text{C} \xrightarrow{\text{reduction}} \text{N-methylaniline}$
 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	1	3	1	4	2	3	4	4	3	3
Ques.	12	13	14	15	16	17	18	19	20		
Ans.	1	1	1	3	3	4	3	1	2		