



CHEMISTRY

BOOKS - SURA CHEMISTRY (TAMIL ENGLISH)

ORGANIC NITROGEN COMPOUNDS

Choose The Correct Answer

1. Which of the following reagent can be used to convert nitrobenzene to aniline

A. Sn/HCl

B. ZnHg/NaOH

C. $LiAlH_4$

D. All of these

Answer: A::C

 [Watch Video Solution](#)

2. The method by which aniline cannot be prepared is

A. degradation of benzamide with $Br_2/NaOH$.

B. potassium salt of phthalimide treated with chlorobenzene
followed by hydrolysis with aqueous NaOH solution.

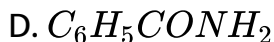
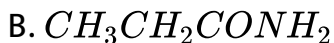
C. hydrolysis of phenylcyanide with acidic solution

D. reduction of nitrobenzene by Sn/HCl

Answer: B

 [Watch Video Solution](#)

3. Which one of the following will not undergo Hofmann bromamide reaction



Answer: A



Watch Video Solution

4. Assertion : Acetamide on reaction with KOH and bromine gives acetic acid.

Reason : Bromine catalyses hydrolysis of acetamide.

A. if both assertion and reason are true and reason is the correct explanation of assertion.

B. if both assertion and reason are true but reason is not the correct explanation of assertion.

C. assertion is true but reason is false

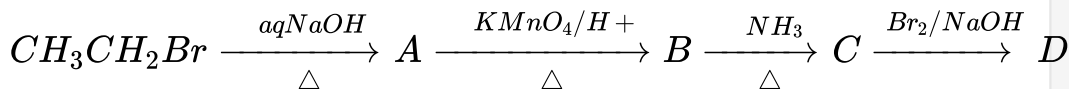
D. both assertion and reason are false.

Answer: D



Watch Video Solution

5.



A. bromomethane

B. α -bromo sodium acetate

C. methanamine

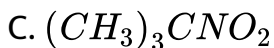
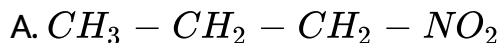
D. acetamide

Answer: C



Watch Video Solution

6. Which one of the following nitro compounds does not react with nitrous acid



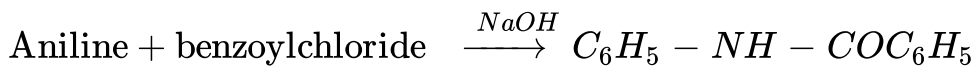
D. 

Answer: C



Watch Video Solution

7.



this reaction is known as

- A. Friedel- crafts reaction
- B. HVZ reaction
- C. Schotten-Baumann reaction
- D. None of these

Answer: C



Watch Video Solution

8. The product formed by the reaction an aldehyde with a primary amine

A. carboxylic acid

B. aromatic acid

C. schiff's base

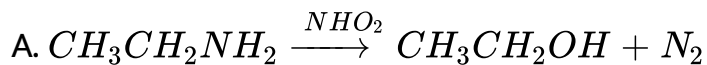
D. ketone

Answer: C

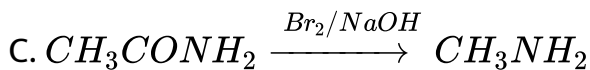


Watch Video Solution

9. Which of the following reaction is not correct.



B. 



D. None of these

Answer: B



[View Text Solution](#)

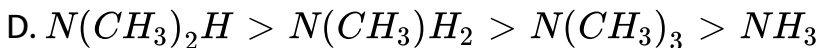
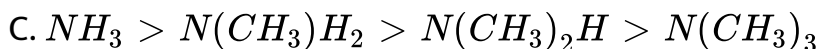
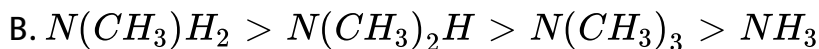
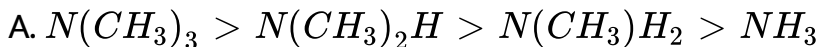
10. When aniline reacts with acetic anhydride the product formed is

- A. o-aminoacetophenone
- B. m-aminoacetophenone
- C. p-aminoacetophenone
- D. acetanilide

Answer: D

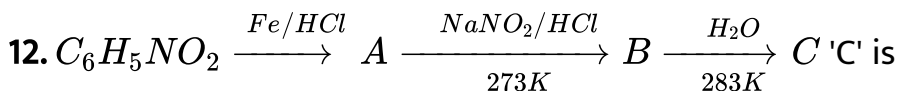
 Watch Video Solution

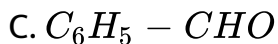
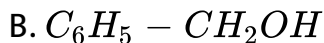
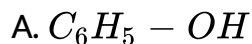
11. The order of basic strength for methyl substituted amines in aqueous solution is



Answer: D

 Watch Video Solution





Answer: A



Watch Video Solution

13. Nitrobenzene on reaction with fuming nitric acid at $80 - 100^\circ C$ forms which one of the following products?

A. 1,4 - dinitrobenzene

B. 2,4,6 - trinitrobenzene

C. 1,2 - dinitrobenzene

D. 1,3 - dinitrobenzene

Answer: D

 [Watch Video Solution](#)

14. $C_5H_{13}N$ reacts with HNO_2 to give an optically active compound - The compound is

- A. pentan - 1 - amine
- B. pentan - 2 - amine
- C. N,N - dimethylpropan - 2 - amine
- D. N - methylbutan - 2 - amine

Answer: B

 [Watch Video Solution](#)

15. Secondary nitro alkanes react with nitrous acid to form

- A. red solution
- B. blue solution
- C. green solution
- D. yellow solution

Answer: B



Watch Video Solution

16. Which of the following amines does not undergo acetylation?

- A. t- butylamine
- B. ethylamine
- C. diethylamine

D. triethylamine

Answer: D

 [Watch Video Solution](#)

17. Which one of the following is most basic?

A. 2,4 - dichloroaniline

B. 2,4 - dimethyl aniline

C. 2,4 - dinitroaniline

D. 2,4, - dibromoaniline

Answer: B

 [Watch Video Solution](#)

18. Ammonium salt of benzoic acid is heated strongly with P_2O_5 and the product so formed is reduced and then treated with $NaNO_2/HCl$ at low temperature. The final compound formed is

- A. Benzene diazonium chloride
- B. Benzyl alcohol
- C. Phenol
- D. Nitrosobenzene

Answer: B

 [Watch Video Solution](#)

19. Among the following, the reaction that proceeds through an electrophilic substitution is

A. 

B. 

C. 

D. 

Answer: B



[View Text Solution](#)

20. Nitroation of nitrobenzene results in

A. o-dinitrobenzene

B. 1,2,3 trinitrobenzene

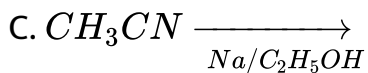
C. m-dinitrobenzene

D. p-dinitrobenzene

Answer: C

 Watch Video Solution

21. Which among the following reaction will give a secondary amine?



Answer: D

 Watch Video Solution

22. Electrolytic reduction of nitrobenzene in strongly acidic medium gives

- A. aniline
- B. p-aminophenol
- C. m-nitroaniline
- D. azoxybenzene

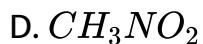
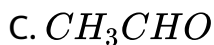
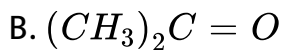
Answer: B



[Watch Video Solution](#)

23. $(CH_3)_2 - CH - NO$ when boiled with HCl/H_2O gives compound 'X'. Identify 'X'.

- A. CH_3COOH

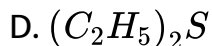
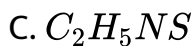
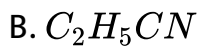
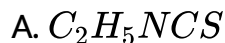


Answer: B



Watch Video Solution

24. Ethylamine on heating with CS_2 in the presence of $HgCl_2$ forms



Answer: A

 [Watch Video Solution](#)

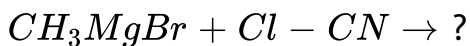
25. Which of the following cannot be prepared by Sandmeyer's reaction?

- A. Iodobenzene
- B. Fluorobenzene
- C. Both A and B
- D. Neither A nor B

Answer: C

 [Watch Video Solution](#)

26. Identify the product of the following reaction.



- A. ethanenitrile
- B. acetamide
- C. propanenitrile
- D. acetaldoxime

Answer: A



[Watch Video Solution](#)

27. Positive carbylamine test is not shown by?

- A. methyl amine
- B. aniline

C. N-ethyl aniline

D. triethyl amine

Answer: D



[Watch Video Solution](#)

28. The gas responsible for Bhopal Gas Tragedy is

A. Phosgene

B. Methyl isocyanide

C. Methyl isocyanate

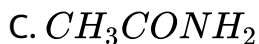
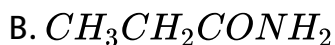
D. Methyl isothiocyanide

Answer: C



[Watch Video Solution](#)

29. Identify the amide which will not undergo Hofmann bromamide reaction.



D. Both B and C

Answer: A



Watch Video Solution

30. Which among the following will form significant amount of meta isomer on nitration?

A. 

B. 

C. 

D. 

Answer: B



Watch Video Solution

31. Which among the following exists as zwitter ion?

A. sulphanilic acid

B. salicylic acid

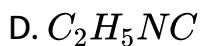
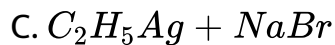
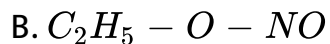
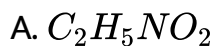
C. acetanilide

D. All of these

Answer: A

 [Watch Video Solution](#)

32. Bromo ethane reacts with silver nitrite to give



Answer: A

 [Watch Video Solution](#)

33. In nitro alkanes – NO_2 group is converted to – NH_2 group by the reaction with

A. Sn/HCl

B. Zn dust

C. Zn/NH_2

D. $Zn/NaOH$

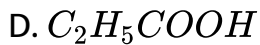
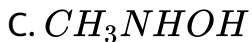
Answer: A



Watch Video Solution

34. When nitromethane is reduced with Zn dust + NH_4Cl in neutral medium, we get

A. CH_3NH_2



Answer: C



Watch Video Solution

35. The compound that is most reactive towards electrophilic nitration is

A. Toluene

B. Benzene

C. Benzoic acid

D. Nitrobenzene

Answer: A



Watch Video Solution

36. Nitromethane condenses with acetaldehyde to give

- A. nitro propane
- B. 1-nitro 2-proanol
- C. 2-nitro-1-propanol
- D. 3-nitro propanol

Answer: B



Watch Video Solution

37. Which of the following compounds has the smell of bitter almonds?

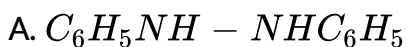
- A. aniline
- B. nitro methane
- C. benzene sulphoni acid
- D. Nitrobenzene

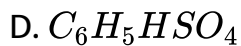
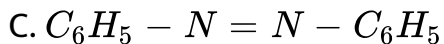
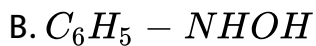
Answer: D



[Watch Video Solution](#)

38. Nitrobenzene on electrolytic reduction in con. sulphuric acid, the intermediate formed is





Answer: B



Watch Video Solution

39. Electrophile used in the nitration of benzene is

A. hydronium ion

B. sulphonic acid

C. nitronium ion

D. bromide ion

Answer: C

 Watch Video Solution

40. The reduction of $CH_3 - CH_2 - C \equiv N$ with sodium and alcohol results in the formation of

A. 

B. $CH_3 - CH_2 - CH_2 - OH + N_2$

C. $CH_3 - CH_2 - CH_2 - NH_2$

D. $CH_3 - CH_2 - NH_2$

Answer: C

 Watch Video Solution

41. The basic character of amines is due to the

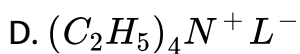
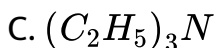
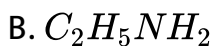
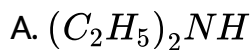
- A. tetrahedral structure
- B. presence of nitrogen atom
- C. lone pair of electrons on nitrogen atom
- D. high electronegativity of nitrogen

Answer: C



Watch Video Solution

42. The organic compound that undergoes carbylamine reaction is



Answer: B

 [Watch Video Solution](#)

43. Primary amine acts as

A. Electrophile

B. Lewis base

C. Lewis acid

D. Free radical

Answer: B

 [Watch Video Solution](#)

44. Oxidation of aniline with acidified potassium dichromate gives

- A. p-benzo quinone
- B. benzoic acid
- C. benzaldehyde
- D. benzyl alcohol

Answer: A



[Watch Video Solution](#)

45. Which one of the following is a secondary amine?

- A. aniline
- B. diphenyl amine

C. sec.butylamine

D. tert.butylamine

Answer: B



Watch Video Solution

46. $C_6H_5NH_2 \xrightarrow{NaNO_2/HCl} X$ Identify X.

A. C_6H_5Cl

B. C_6H_5NHON

C. $C_6H_5N_2Cl$

D. C_6H_5OH

Answer: C



Watch Video Solution

47. Which of the following will not undergo diazotisation?

- A. m-toludine
- B. aniline
- C. p-amino phenol
- D. benzyl amine

Answer: D



Watch Video Solution

48. Aniline differs from ethylamine by the reaction with

- A. metallic sodium
- B. an alkyl halide

C. chloroform and caustic potash

D. nitrous acid

Answer: D



[Watch Video Solution](#)

49. When aqueous solution of benzene diazonium chloride is boiled the product formed is

A. benzyl alcohol

B. benzene + N_2

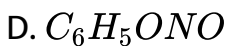
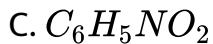
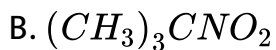
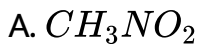
C. phenol

D. phenyl hydroxylamine

Answer: C

 [Watch Video Solution](#)

50. Which among the following dissolves in NaOH?



Answer: A

 [Watch Video Solution](#)

51. On hydrolysis nitro ethane gives

A. methyl amine and hydroxyl amine

- B. acetic acid and methyl amine
- C. acetic acid and hydroxyl amine
- D. formic acid and hydroxyl amine

Answer: C



Watch Video Solution

52. When nitro methane condenses with acetone it gives

- A. 1-nitro-2-propanol
- B. 1-nitro-2-methoxy propane
- C. 1-nitro-2-methoxy-ethanol
- D. 1-nitro-2-methoxy-propanol

Answer: D

 [Watch Video Solution](#)

53. Which gives an yellow oil with nitrous acid?

A. 1° amine

B. 2° amine

C. 3° amine

D. quarternary salt

Answer: B

 [Watch Video Solution](#)

54. Alkyl cyanide on reduction with $LiAlH_4$ ether gives,

A. amine

B. tertiary amine

C. primary amine

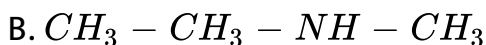
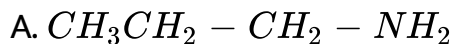
D. 2° amine

Answer: C



Watch Video Solution

55. An organic compound 'A' with molecular formula C_3H_9N neither give nitrogen nor yellow oily liquid with HNO_2 . Then A is



C. 

D. All of these

Answer: C



View Text Solution

56. The test for aniline is

- A. Fehling's test
- B. Ferric chloride test
- C. Bromination test
- D. Riemer Tiemann test

Answer: C



Watch Video Solution

57. Chloropicrin (CCl_3NO_2) is used as

A. dyes

B. pharmaceuticals

C. explosives

D. soil sterilizing agents

Answer: D



Watch Video Solution



Then X and Y are

A. Schiff's Base, $C_6H_5NH_2$

B. C_6H_6 , C_6H_5CHO

C. benzal -N-methyl amine, Toluene

D.

Answer: A

 [Watch Video Solution](#)

59. Which among the following is a tertiary nitro compound?

A. 

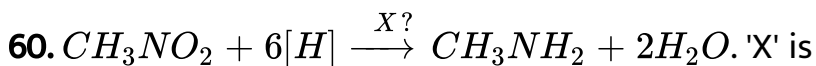
B. 

C. $CH_3CH_2CH_2 - NO_2$

D. 

Answer: A

 [View Text Solution](#)



A. Sn/HCl

B. Zn/NH_4Cl

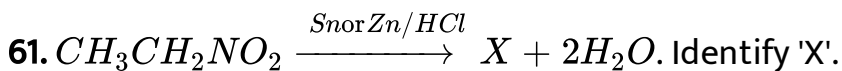
C. Glucose + $NaOH$

D. $Na_3AsO_3/NaOH$

Answer: A



Watch Video Solution



A. CH_3NH_2

B. CH_3CONH_2

C. $CH_3CH_2NH_2$



Answer: C

 [Watch Video Solution](#)

62. Tertiary amine is less basic than secondary amine because of

A. delocalisation of π electrons

B. resonance effect

C. inductive effect

D. steric effect

Answer: D

 [View Text Solution](#)

63. An organic compound C_7H_9N answers carbylamine reaction but produces primary alcohol with nitrous acid. The compound may be

- A. p-toludine
- B. o-toluidine
- C. benzylamine
- D. m-toludine

Answer: C



Watch Video Solution

64. Which of the following nitro-compounds behave as an acid in the presence of strong alkali?

- A. Primary
- B. Secondary
- C. Tertiary
- D. Both A and B

Answer: A



Watch Video Solution

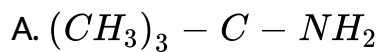
65. Which of the following will not undergo Hoffman's bromamide reaction?

- A. Ethanamide
- B. Propanamide
- C. Methanamide
- D. Phenyl methanamide

Answer: A

 [Watch Video Solution](#)

66. Which among the following is a tertiary amine?



B. 

C. 

D. 

Answer: C

 [View Text Solution](#)

67. Aniline react with benzoyl chloride in the presence of sodium hydroxide and gives benzanilide. This reaction is known as

- A. Gattermann reaction
- B. Sandmeyer's reaction
- C. Schotten -Baumann reaction
- D. Gomberg -Bachmann reaction

Answer: C



[View Text Solution](#)

68. The product obtained when nitrobenzene is treated with $Zn/NaOH$ is

- A. aniline

B. azoxybenzene

C. azobenzene

D. hydrazobenzene

Answer: D



Watch Video Solution

69. Which one of the following is the most basic?

A. Ammonia

B. Methylamine

C. Dimethylamine

D. Aniline

Answer: C

 [Watch Video Solution](#)

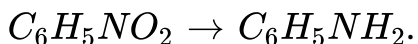
70. Methyl isocyanide on reduction using $LiAlH_4$ gives :

- A. Methyl amine
- B. Ethyl amine
- C. Dimethyl amine
- D. Trimethyl amine

Answer: C

 [Watch Video Solution](#)

71. The reagent that cannot be used for the conversion of



A. Sn/HCl

B. LiAlH_4

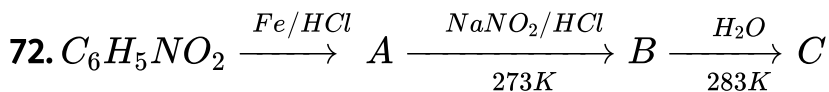
C. H_2/Ni

D. Zn/NaOH

Answer: D



View Text Solution

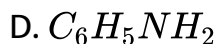


'C' is

A. $\text{C}_6\text{H}_5 - \text{OH}$

B. $\text{C}_6\text{H}_5 - \text{CH}_2\text{OH}$

C. $\text{C}_6\text{H}_5 - \text{CHO}$



Answer: A

 [View Text Solution](#)

73. Assertion (A) : Methyl cyanide has higher boiling point than methyl isocyanide.

Reason (R) : Dipole moment of methyl cyanide is higher than that of methyl iso cyanide.

A. (A) and (R) are true and (R) is the correct explanation of

(A)

B. Both (A) and (R) are true but (R) does not explain (A)

C. (A) is true but (R)is false

D. Both (A) and (R) are false

Answer: A



[View Text Solution](#)

74. Choose the incorrect statement among the following

- A. Primary amine show intermolecular bond
- B. Isopropyl amine is a secondary amine
- C. Amines are basic in nature
- D. Tertiary amines do not show intermolecular hydrogen bonds

Answer: B



[View Text Solution](#)

Short Answer Questions

1. Write down the possible isomers of the $C_4H_9NO_2$ give their IUPAC names.

 [Watch Video Solution](#)

2. There are two isomers with the formula CH_3NO_2 . How will you distinguish between them?

 [Watch Video Solution](#)

3. What happens when
2 - Nitropropane boiled with HCl.

 [Watch Video Solution](#)

4. What happens when

Nitrobenzene undergo electrolytic reduction in strongly acidic medium.

 [Watch Video Solution](#)

5. What happens when

Oxidation of tert - butylamine with $KMnO_4$.

 [Watch Video Solution](#)

6. What happens when

Oxidation of acetoneoxime with trifluoroperoxy acetic acid.

 [Watch Video Solution](#)

7. How will you convert nitrobenzene into

1,3,5 - trinitrobenzene



[Watch Video Solution](#)

8. How will you convert nitrobenzene into

o and p- nitrophenol



[Watch Video Solution](#)

9. How will you convert nitrobenzene into

m- nitro aniline



[Watch Video Solution](#)

10. How will you convert nitrobenzene into azoxybenzene



Watch Video Solution

11. How will you convert nitrobenzene into hydrozobenzene



Watch Video Solution

12. How will you convert nitrobenzene into N - phenylhydroxylamine

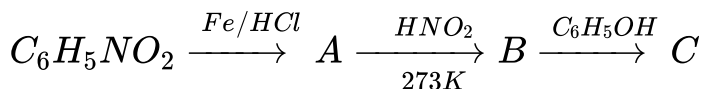


Watch Video Solution

13. How will you convert nitrobenzene into aniline

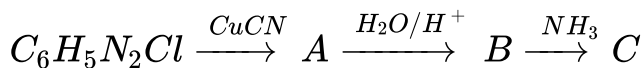
 [Watch Video Solution](#)

14. Identify compounds A,B and C in the following sequence of reactions.



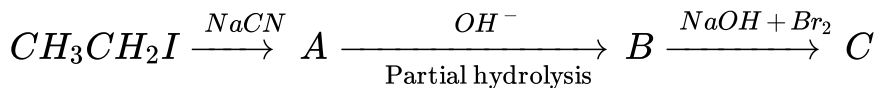
 [Watch Video Solution](#)

15. Identify compounds A,B and C in the following sequence of reactions.



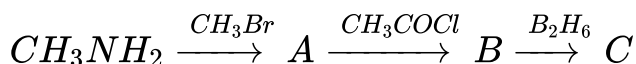
 [Watch Video Solution](#)

16. Identify compounds A,B and C in the following sequence of reactions.



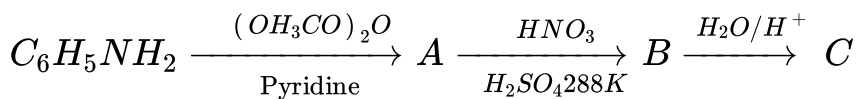
 [Watch Video Solution](#)

17. Identify compounds A,B and C in the following sequence of reactions.



 [Watch Video Solution](#)

18. Identify compounds A,B and C in the following sequence of reactions.





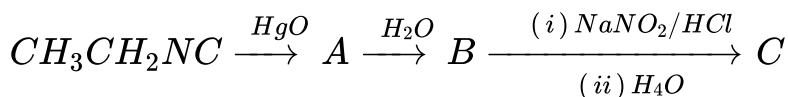
Watch Video Solution

19. Identify compounds A,B and C in the following sequence of reactions.



View Text Solution

20. Identify compounds A,B and C in the following sequence of reactions.



Watch Video Solution

21. Write short notes on Hofmann's bromide reaction .

 [Watch Video Solution](#)

22. Write short notes on the following

Ammonolysis

 [View Text Solution](#)

23. Write short notes on the following

Gabriel phthalimide synthesis

 [Watch Video Solution](#)

24. Write short notes on the following

Schotten - Baumann reaction

 [Watch Video Solution](#)

25. Write short notes on Carbylamine reaction .

 [Watch Video Solution](#)

26. Write short notes on the following

Maustard oil reaction

 [Watch Video Solution](#)

27. Write short notes on the following

Coupling reaction

 [Watch Video Solution](#)

28. Write short notes on the following

Diazotisation



Watch Video Solution

29. GOMBERG REACTION



Watch Video Solution

30. How will you distinguish between primary secondary and tertiary aliphatic amines.



Watch Video Solution

31. Why aniline does not undergo Friedel - Crafts reaction ?

 [Watch Video Solution](#)

32. According for the following

Diazonium salts of aromatic amines are more stable than those of aliphatic amines.

 [View Text Solution](#)

33. According for the following

pK_b of aniline is more than that of methylamine.

 [View Text Solution](#)

34. According for the following

Gabriel phthalimide synthesis is preferred for synthesising

primary amines.

 [View Text Solution](#)

35. Ethylamine is soluble in water whereas aniline is not soluble in water.

 [Watch Video Solution](#)

36. Amines are more basic than

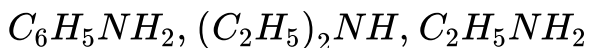
 [Watch Video Solution](#)

37. Can the amino group, in the aniline molecule, become meta-directing in an electrophilic substitution reaction ?

 [Watch Video Solution](#)

38. Arrange the following.

In increasing order of solubility in water,



[Watch Video Solution](#)

39. Arrange the following.

In increasing order of basic strength

aniline, p - toludine, P - nitroaniline



[Watch Video Solution](#)

40. Arrange the following.

In increasing order of basic strength

$C_6H_5NH_2$, $C_6H_5NHCH_3$, $C_6H_5NH_2$, $P - Cl - C_6H_4 - NH_2$

 [Watch Video Solution](#)

41. Arrange the following.

In increasing order of basic strength in gas phase

$(C_2H_5)CH_2$, $(C_2H_5)NH$, $(C_2H_5)_5N$ and NH_3 .

 [Watch Video Solution](#)

42. Arrange the following.

In increasing order of boiling point

C_6H_5OH , $(CH_3)_2NH$, $C_2H_5NH_2$

 [Watch Video Solution](#)

43. Arrange the following.

In decreasing order of the pK_b values

$C_2H_5NH_2$, $C_6H_5NHCH_3$, $(C_2H_5)_2NH$ and CH_3NH_2

 [Watch Video Solution](#)

44. Arrange the following.

Increasing order of basic strength

$C_6H_5NH_2$, $C_6H_5N(CH_3)$, $(C_2H_5)_2NH$ and CH_3NH_2

 [Watch Video Solution](#)

45. Arrange the following.

In decreasing order of basic strength





[View Text Solution](#)

46. How will you prepare propan - 1- amine from

Butane nitrile



[Watch Video Solution](#)

47. How will you prepare propan - 1- amine from

Propanamide



[Watch Video Solution](#)

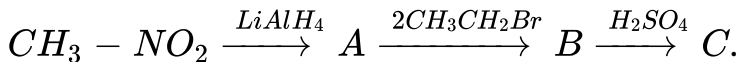
48. How will you prepare propan - 1- amine from

1 - nitropropane



[Watch Video Solution](#)

49. Identify A, B, C and D



Watch Video Solution

50. How will you convert diethylamine into

N,N- diethylacetamide



Watch Video Solution

51. How will you convert diethylamine into

N-nitrosodiethylamine



Watch Video Solution

52. Identify A,B and C



 [View Text Solution](#)

53. Identify A,B,C and D



 [Watch Video Solution](#)

54. Complete the following reaction



 [View Text Solution](#)

55. Predict A,B,C and D for the following reaction



[View Text Solution](#)

56. A Dibromo derivative (A) on treatment with KCN followed by acid hydrolysis and heating gives a monobasic acid (B) along with liberation of CO_2 . (B) on heating with liquid ammonia followed by treating with Br_2/KOH gives (C) which on treating with $NaNO_3$ and HCl at low temperature followed by oxidation gives a monobasic acid (D) having molecular mass 74. Identify A to D.



[Watch Video Solution](#)

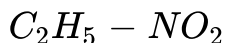
57. Identify A to E in the following frequency of reactions.



[View Text Solution](#)

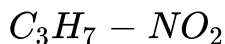
Evaluate Yourself

1. Write all possible isomers for the following compounds.



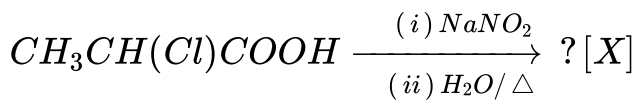
[Watch Video Solution](#)

2. Write all possible isomers for the following compounds.



[Watch Video Solution](#)

3. Find out the product of the following reactions.



 [Watch Video Solution](#)

4. Find out the product of the following reactions.



 [Watch Video Solution](#)

5. Predict the major product that would be obtained on nitration of the following compounds.



 [View Text Solution](#)

6. Predict the major product that would be obtained on nitration of the following compounds.



 [View Text Solution](#)

7. Predict the major product that would be obtained on nitration of the following compounds.



 [View Text Solution](#)

8. Draw the structure of the following compounds.

Neopentylamine

 [Watch Video Solution](#)

9. Draw the structure of the following compounds.

Tert - butylamine



Watch Video Solution

10. Draw the structure of the following compounds.

α - amino propionaldehyde



Watch Video Solution

11. Draw the structure of the following compounds.

Tribenzylamine



Watch Video Solution

12. Draw the structure of the following compounds.

N-ethyl - N - methylhexen - 3 - amines

 [Watch Video Solution](#)

13. Give the correct IUPAC names for the following amines.



 [View Text Solution](#)

14. Give the correct IUPAC names for the following amines.



 [View Text Solution](#)

15. Give the correct IUPAC names for the following amines.



[View Text Solution](#)

16. Give the correct IUPAC names for the following amines.



[View Text Solution](#)

17. Give the correct IUPAC names for the following amines.



[View Text Solution](#)

1. Amines have.....odour.

A. carbolic

B. mustard oil

C. fishy

D. garlic

Answer: C



[Watch Video Solution](#)

2. The major product obtained when aniline is treated with acetic anhydride in the the presence of pyridine is.....

A. p bromo acetanilide

B. p - bromo aniline

C. acetanilide

D. 2,4,6 tribromo aniline

Answer: A



Watch Video Solution

3. Amine that cannot be prepared by Gabriel Phthalimide synthesis is.....

A. benzyl amine

B. methyl amine

C. ethyl amine

D. phenyl amine

Answer: D

 [Watch Video Solution](#)

4. Primary amine reacts with $CHCl_3/KOH$ the product formed is.....and the reactions is called.....reaction.

- A. cyanide, carbyl amine
- B. iso cyanide, carbylamine
- C. isocyanide, mustard oil
- D. cyanide, mustard oil

Answer: B

 [View Text Solution](#)

5. Aniline treated with H_2SO_4 forms.....

- A. S-diphenyl urea
- B. acetanilide
- C. m-amino benzene sulphonic acid
- D. sulphanilic acid

Answer: D



Watch Video Solution

6. The product formed when an aldehyde reacts with a primary amine is.....

- A. carboxylic acid
- B. Carbylamine

C. schiff's base

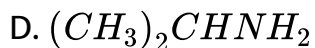
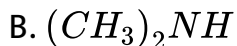
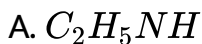
D. Azodyes

Answer: C



Watch Video Solution

7. The compound which gives an oily nitrosamine on reaction with nitrous acid at low temperature is.....



Answer: B



[View Text Solution](#)

8. The isomerism exhibited by 1-nitro butane and 1-nitro-2-methyl propane is.....

- A. chain
- B. tautomerism
- C. position
- D. functional

Answer: B



[View Text Solution](#)

9. p -amino phenol is the product of reducing nitrobenzene in.....

- A. acid medium
- B. basic medium
- C. electrolytic reduction
- D. neutral medium

Answer: C



Watch Video Solution

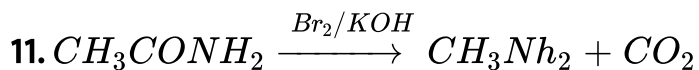
10. Sandmeyer's reaction occurs in the presence of.....and.....

- A. cuprous halide and haloacid
- B. cupric halide and halogen
- C. copper-zinc couple and H_2
- D. None of these

Answer: A



[View Text Solution](#)



This is.....reaction.

A. Hoffman bromamide

B. HVZ

C. Gabriel reaction

D. Gomberg Bachmann

Answer: A



[View Text Solution](#)

12. The nitro group can be reduced to primary amino group by.....

A. $\text{Sn}/\text{con.HCl}$

B. Zn dust

C. $\text{Zn}/\text{NH}_4\text{Cl}$

D. Zn/NaOH

Answer: A



[View Text Solution](#)

13. Conversion of benzene diazonium chloride to chlorobenzene is called.....

A. Sandmeyer's reaction

B. Stephen's reaction

C. Gomberg reaction

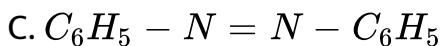
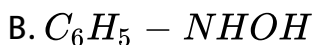
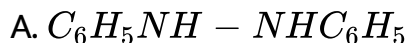
D. Schotten - Baumann reaction

Answer: A



[View Text Solution](#)

14. The intermediate formed on electrolytic reduction of nitrobenzene in conc. H_2SO_4 is.....



D. All of these

Answer: B

 [Watch Video Solution](#)

15. The compound that does not show tautomerism is.....

A. nitrobenzene

B. nitro methane

C. nitro ethane

D. 2-nitro propane

Answer: A

 [View Text Solution](#)

16. Nitro-acinitro tautomerism is exhibited by.....

A. nitro methane

B. nitrobenzene

C. chloropicrin

D. o-toluidine

Answer: A



Watch Video Solution

17. CCl_3NO_2 is used as.....

A. soil sterilizing agent

B. organic synthesis

C. good solvent

D. antioxidant

Answer: A

 [Watch Video Solution](#)

18. The reaction between benzene diazonium chloride and benzene in the presence of $NaOH$ is.....

- A. Perkin's reaction
- B. Gattermann's reaction
- C. Sandmeyer reaction
- D. Gomberg-Bachmann reaction

Answer: D

 [Watch Video Solution](#)

19. Use of chloropicrin is as.....

- A. explosive
- B. dye
- C. anaesthetic
- D. sterilizing agent

Answer: D



Watch Video Solution

20. Oil of mirbane is.....

- A. nitrobenzene
- B. benzaldehyde
- C. methyl salicylate

D. aspirin

Answer: A

 [Watch Video Solution](#)

21. Oxidation of aniline with acidified potassium dichromate gives

A. p-benzo quinone

B. benzoic acid

C. benzaldehyde

D. benzyl alcohol

Answer: A

 [Watch Video Solution](#)

22. The tertiary nitro compound is.....

- A. 2-nitropropane
- B. 1-nitropropane
- C. 1-nitro-2,2-dimethyl propane
- D. 2-nitro-2-methyl propane

Answer: D



[Watch Video Solution](#)

23. The intermediate formed in the nitration of benzene is.....

- A. Arenium ion
- B. Carbanion

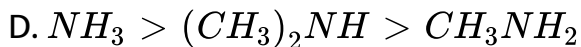
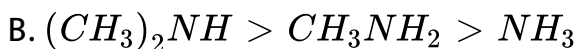
C. Oxinium ion

D. Nitrite ion

Answer: A

 [Watch Video Solution](#)

24. The basic strength of amine is in the order of.....



Answer: B

 [Watch Video Solution](#)

Assertion And Reason

1. Assertion (A) : Aniline reacts with Br_2/H_2O to give a white precipitate of 2,4,6-tribromoaniline.

Reason (R) : Aniline is resonance stabilized.

A. (A) and (R) are true and (R) is the correct explanation of

(A)

B. Both (A) and (R) are true but (R) does not explain (A)

C. (A) is true but (R) is false

D. Both (A) and (R) are false

Answer: B



[View Text Solution](#)

2. Assertion (A) : Aniline couples with $NaNO_2/HCl$ to give β -Naphthol which is a blue colour precipitate.

Reason (R) : The colour of the compound is due to conjugation of the ring.

A. (A) and (R) are true and (R) is the correct explanation of

(A)

B. Both (A) and (R) are true but (R) does not explain (A)

C. (A) is true but (R) is false

D. Both (A) and (R) are false

Answer: D



View Text Solution

3. Assertion (A) : Methyl cyanide has higher boiling point than methyl isocyanide.

Reason (R) : Dipole moment of methyl cyanide is higher than that of methyl iso cyanide.

A. (A) and (R) are true and (R) is the correct explanation of

(A)

B. Both (A) and (R) are true but (R) does not explain (A)

C. (A) is true but (R)is false

D. Both (A) and (R) are false

Answer: A



View Text Solution

4. Assertion (A) : Aniline is less basic than NH_3 .

Reason (R) : Greater the value of pK_b , stronger is the base.

A. (A) and (R) are true and (R) is the correct explanation of

(A)

B. Both (A) and (R) are true but (R) does not explain (A)

C. (A) is true but (R) is false

D. Both (A) and (R) are false

Answer: C



[View Text Solution](#)

5. Assertion (A) : Ethyl amine gives positive carbylamine and mustard oil reaction.

Reason (R) : Ethyl amine is a 1° amine.

A. (A) and (R) are true and (R) is the correct explanation of

(A)

B. Both (A) and (R) are true but (R) does not explain (A)

C. (A) is true but (R) is false

D. Both (A) and (R) are false

Answer: A



View Text Solution

6. Assertion (A) : Aniline decolourises bromine water with the formation of white precipitate which is TNT.

Reason (R) : Electrophilic substitution reaction proceed under

milder conditions in aniline because of the activated benzene ring.

A. (A) and (R) are true and (R) is the correct explanation of

(A)

B. Both (A) and (R) are true but (R) does not explain (A)

C. (A) is true but (R) is false

D. Both (A) and (R) are false

Answer: C



View Text Solution

Incorrect Statements

1. Pick out incorrect statement with respect to methyl nitrite

- A. They are also called Pseudo acid
- B. High electrical conductivity
- C. Decolourises $FeCl_3$ solution
- D. Dissolves in $NaOH$ instantly

Answer: C



[View Text Solution](#)

2. Which among the following is the incorrect statement regarding the acidic nature of nitroalkanes?

- A. 1° and 2° nitroalkanes show acidic character
- B. nitroalkane dissolve in $NaOH$ to give salt
- C. aci form is more acidic than intro form
- D. acidity decreases due to the - I effect of alkayl groups

Answer: D



[View Text Solution](#)

3. Choose the incorrect statement among the following

- A. Primary amine show intermolecular bond
- B. Isopropyl amine is a secondary amine
- C. Amines are basic in nature
- D. Tertiary amines do not show intermolecular hydrogen bonds

Answer: B



[View Text Solution](#)

1. Give the IUPAC name of the following compounds.



 [View Text Solution](#)

2. Give the IUPAC name of the following compounds.

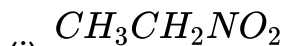


 [View Text Solution](#)

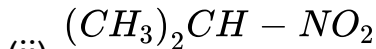
3. Define tautomerism.

 [View Text Solution](#)

4. Which among the following nitro compound will not exhibit tautomerism and why?



nitro ethane



2- nitropropane



[View Text Solution](#)

5. Explain the conversion of benzene to nitrobenzene.



[View Text Solution](#)

6. Two isomers having the molecular formula $C_2H_5NO_2$ on hydrolysis in acidic medium gives (A) and (B). Identify (A) and (B) and explain the reactions involved.



[View Text Solution](#)

7. Use of chloropicrin is as.....

 [Watch Video Solution](#)

8. Complete the following :



 [View Text Solution](#)

9. Complete the following :



 [View Text Solution](#)

10. Nitrobenzene does not undergo Friedel - Crafts reaction -
Give reason.

 [View Text Solution](#)

11. Write about the functional isomerism of nitro methane ?

 [Watch Video Solution](#)

12. Give the reduction of nitromethane in (a) acid medium, (b)
neutral medium.

 [Watch Video Solution](#)

13. Explain the reduction of nitro methane in different medium.

 [Watch Video Solution](#)

14. How will you convert benzene to m-dinitro benzene?

 [Watch Video Solution](#)

15. What are amines ? How are they classified ?

 [Watch Video Solution](#)

16. Give the structural formula of (i) 2-amino-2-methyl propane.

(ii) 2-(N, N-dimethyl) amino butane

 [Watch Video Solution](#)

17. Give the structural formula of (i) 2-amino-2-methyl propane.

(ii) 2-(N, N-dimethyl) amino butane



[Watch Video Solution](#)

18. What happens when acetonitrile is hydrolysed?



[View Text Solution](#)

19. Write the name and structure of four isomeric amines having the molecular formula C_3H_9N .



[Watch Video Solution](#)

20. How will you distinguish between ethylamine and diethylamine?



[View Text Solution](#)

21. Explain the ethylamine is stronger than ammonia?



[View Text Solution](#)

22. What happens when aniline is treated with bromine ?



[Watch Video Solution](#)

23. How will you distinguish between aniline and ethylamine.



[View Text Solution](#)

24. Explain why aniline is less basic than methylamine?



[View Text Solution](#)

25. How is benzene diazonium chloride prepared?



[Watch Video Solution](#)

26. Explain why amines are more basic than amides.

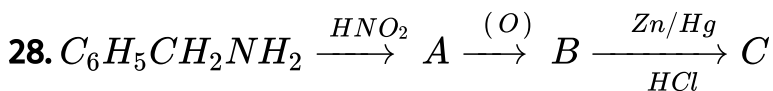


[View Text Solution](#)

27. When benzamide is treated with bromine and alkali gives compound A. Also when benzamide is reduced by $LiAlH_4$,

compound B is formed. Find A and B. Write the equations.

 [View Text Solution](#)



Identify A,B and C.

 [View Text Solution](#)

29. An aromatic primary amine A with molecular formula C_6H_7N undergoes diazotisation to give B. B when treated with hypophosphorous acid gives C. Identify A, B and C.

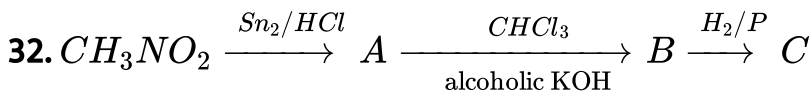
 [Watch Video Solution](#)

30. An aromatic simplest nitro compound A on reduction using Sn and HCl gives B. B undergoes carbylamine reaction. Identify A and B. Give any one use of compound A.

 [View Text Solution](#)

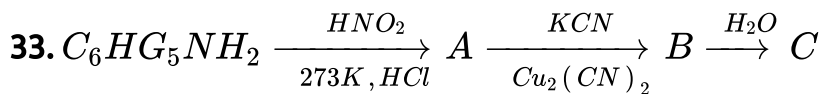
31. An organic compound A of molecular formula C_2H_5ON treated with bromine and KOH gives B of molecular formula CH_5N . Identify A and B. Write the equation involved.

 [View Text Solution](#)



Identify A, B and C.

 [Watch Video Solution](#)



Identify A, B and C.



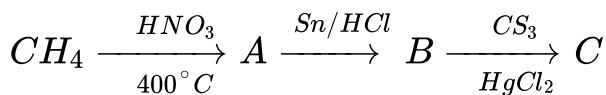
[View Text Solution](#)

34. An aromatic hydrocarbon A on nitration gives B which is known as oil of mirbane. B on warming with con. H_2SO_4 gives compound C. Identify A, B and C.

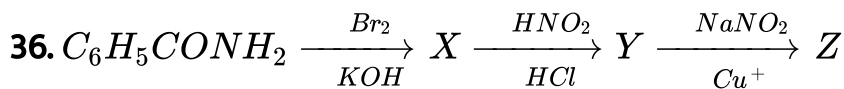


[Watch Video Solution](#)

35. Identify (A), (B) and (C)

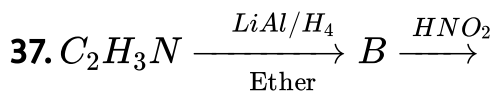


[Watch Video Solution](#)



Identify X,Y and Z.

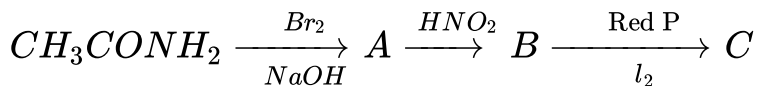
 [View Text Solution](#)



Identify A,B and C.

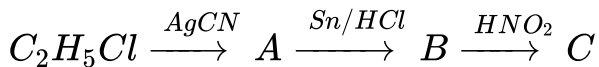
 [View Text Solution](#)

38. Identify the compounds A,B,C in the following reactions:



 [Watch Video Solution](#)

39. Identify the compounds A,B,C in the following reactions:



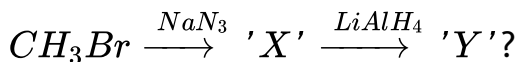
[View Text Solution](#)

40. Bring about the conversion of Chlorobenzene to aniline.



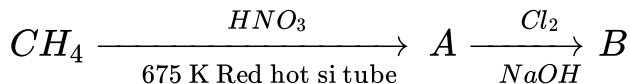
[Watch Video Solution](#)

41. Find 'X' and 'Y'



[Watch Video Solution](#)

42. Identify A and B in the following sequence of reactions.



[Watch Video Solution](#)

43. Convert methyl amine (1° primary amine) to 2° , 3° amine and Quarternary ammonium salt.



[View Text Solution](#)

44. Aniline reacts with bromine water to give a white precipitate. Give the chemical formula of the white precipitate formed in the above reaction.



[View Text Solution](#)

45. Aniline reacts with bromine water to give a white precipitate.

Write the chemical reaction involved.



[View Text Solution](#)

46. Write a note on Libermann's nitroso test.



[View Text Solution](#)

47. Can aniline be prepared by Gabriel phthalimide reaction?

Justify your answer.



[View Text Solution](#)

48. Use the following reagents in the correct order and bring about the conversion of benzene to aniline.

Reagents

HCl , NH_3 , heat, alk $KMnO_4$, $CHCl_3/AlCl_3$, Br_2/KOH

that can be used.



[View Text Solution](#)

49. Write a note on Sandmeyer reaction.



[Watch Video Solution](#)

50. Write short notes on Gomberg reaction.



[Watch Video Solution](#)

51. How is anisole prepared from benzene diazonium chloride?



[View Text Solution](#)

52. How does benzenediazonium chloride react with

KI



[View Text Solution](#)

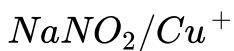
53. How does benzenediazonium chloride react with

KCN



[View Text Solution](#)

54. How does benzenediazonium chloride react with



[View Text Solution](#)

55. How is fluorene prepared from benzenediazonium chloride? Name the reaction.



[View Text Solution](#)

56. Write a reaction to show the conversion of acetic acid to benzoic acid.



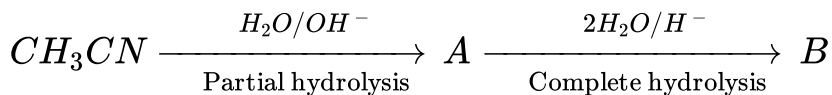
[View Text Solution](#)

57. Complete the following reaction



[View Text Solution](#)

58. Identify A and B.



[Watch Video Solution](#)

59. Write a note on Thrope nitrile condensation.



[View Text Solution](#)

60. Give the IUPAC name of following compounds



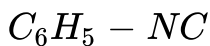
[View Text Solution](#)

61. Give the IUPAC name of following compounds



[View Text Solution](#)

62. Give the IUPAC name of following compounds

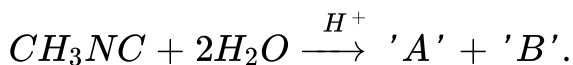


[View Text Solution](#)

63. How is prepared from N-alkyl formamide?

 [View Text Solution](#)

64. Complete the following the reaction.



 [Watch Video Solution](#)

65. Convert methylisocyanide \rightarrow dimethylamine.

 [Watch Video Solution](#)

66. Write a note on addition reactions of alkyl isocynides.

 [View Text Solution](#)

67. What is 'spirit of nitre'? Give its use.

 [View Text Solution](#)

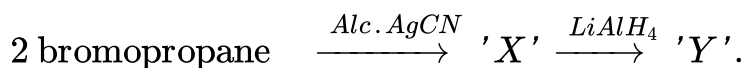
68. Write the uses of nitro alkanes.

 [Watch Video Solution](#)

69. Give any two of nitrobenzene.

 [Watch Video Solution](#)

70. In the given set of reactions,



Identify the product Y and give its IUPAC name.

 [View Text Solution](#)

71. How will you convert diethylamine into

N,N- diethylacetamide

 [Watch Video Solution](#)

72. How will you convert diethylamine into

N-nitrosodiethylamine

 [Watch Video Solution](#)

Short Answer

1. Write a note on acidic nature of nitroalkanes.



[View Text Solution](#)

2. How are nitro alkanes prepared for the following alkyl bromides



[View Text Solution](#)

3. How are nitro alkanes prepared for the following methane



[View Text Solution](#)

4. How will convert nitrobenzene to benzoic acid?

 [Watch Video Solution](#)

5. Write a note on the basicity of amines.

 [View Text Solution](#)

6. An organic compound (A) with molecular formula C_6H_7N gives (B) with HNO_2/HCl at 273 K. The aqueous solution of (B) on heating gives compound (C) which gives violet colour with neutral $FeCl_3$. Identify the compounds (A),(B) and (C) and write the equations.

 [View Text Solution](#)

7. Explain Levine and hauser acetylation.



[View Text Solution](#)

8. Outline the preparation of

(a) para nitroaniline from aniline

(b) tri bromo aniline from aniline



[Watch Video Solution](#)

9. How can the following conversion be effected?

Nitrobenzene to anisole.



[Watch Video Solution](#)

10. How can the following conversion be effected?

Chloro benzene to phenyl hydrazine



[Watch Video Solution](#)

11. How can the following conversion be effected?

Aniline to benzoic acid.

 [View Text Solution](#)

12. How can the following conversion be effected?

Benzene diazonium chloride to ethyl benzene.

 [Watch Video Solution](#)

13. Aniline reacts with Br_2/H_2O to give a tribromo derivative.

How would you convert aniline to get a monobromo derivative?

 [View Text Solution](#)

14. How are the following compounds obtained from benzene diazonium chloride ?

(i) phenol, (ii) ester, (iii) p-hydroxy azo benzene.

 [Watch Video Solution](#)

15. How are the following compounds obtained from benzene diazonium chloride ?

(i) phenol, (ii) ester, (iii) p-hydroxy azo benzene.

 [Watch Video Solution](#)

16. How are the following compounds obtained from benzene diazonium chloride ?

(i) phenol, (ii) ester, (iii) p-hydroxy azo benzene.

 [Watch Video Solution](#)

 [Watch Video Solution](#)

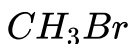
17. Convert aniline to p-nitro aniline.

 [View Text Solution](#)

18. Write a note on structure of amine.

 [View Text Solution](#)

19. Starting from the following reagents, how will you prepare ethanenitrile.



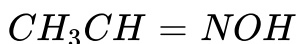
 [View Text Solution](#)

20. Starting from the following reagents, how will you prepare ethanenitrile.



[View Text Solution](#)

21. Starting from the following reagents, how will you prepare ethanenitrile.



[View Text Solution](#)

22. An organic compound 'A' on reduction gives compound 'B' which on reaction with trichloromethane and caustic potash forms 'C'. Compound 'C' on catalytic reduction gives N-methyl benzenamine. Identify A, B and C write the reaction involved.

 [View Text Solution](#)

Long Answer

1. Write a note on the 'reduction of nitro benzene under different conditions.

 [Watch Video Solution](#)

2. Draw a flow chart to show classification of nitro compound giving examples for each type.

 [View Text Solution](#)

3. Account for the following :

$(CH_3)_2NH$ is stronger base than NH_3 .



[View Text Solution](#)

4. Account for the following :

$CH_3CH_2NH_2$ is more basic than CH_3CONH_2 .



[View Text Solution](#)

5. Account for the following :

Aniline is less basic than Ethyl amine.



[View Text Solution](#)

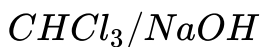
6. Account for the following :

On sulphonation of aniline, p-amino benzene sulphonic acid is formed.



[View Text Solution](#)

7. What happens when ethylamine is treated with



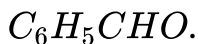
[Watch Video Solution](#)

8. What happens when ethylamine is treated with



[Watch Video Solution](#)

9. What happens when ethylamine is treated with



[View Text Solution](#)

10. Account for

Reduction of CH_3CN gives $CH_3CH_2NH_2$ while CH_3NC gives $(CH_3)_2NH$.



[View Text Solution](#)

11. Account for

$(CH_3)_2NH$ requires two molar proportion of CH_2I to give the same crystalline product formed by $(CH_3)_2N$ with one mole of CH_3I .



[View Text Solution](#)

12. Account for

Nitration of aniline with conc. HNO_3 may end up with same meta nitro product.



[View Text Solution](#)

13. Account for

p-toluidine is a stronger base than p-nitroaniline.



[View Text Solution](#)

14. Account for the following :

Nitroethane is soluble NaOH.



[View Text Solution](#)

15. Account for the following :

Nitroethane reacts with nitrous acid.



[View Text Solution](#)

16. Account for the following :

2-methyl-2-nitro propane has neither of the properties.



[View Text Solution](#)

17. How can the following conversion be effected?

Nitrobenzene \rightarrow Nitrosobenzene.



[Watch Video Solution](#)

18. How can the following conversion be effected?

Nitrobenzene \rightarrow Azoxybenzene.

 [Watch Video Solution](#)

19. How can the following conversion be effected?

Nitrobenzene \rightarrow Hydrazobenzene.

 [Watch Video Solution](#)

20. Write the differences between nitro methane and nitro benzene.

 [Watch Video Solution](#)

21. How do primary, secondary and tertiary amines react with nitrous acid?



View Text Solution

22. Write a note on
Carbylamine reaction.



View Text Solution

23. Write a note on
Mustard oil reaction.



View Text Solution

24. Write a note on

Acetylation of benzylamine.



View Text Solution

25. Write a note on

Formation of Schiff's base.



View Text Solution

26. Write a note on

Diazotisation reaction.



Watch Video Solution

27. Outline the mechanism of

Nitration of aniline.



[View Text Solution](#)

28. Outline the mechanism of

Acetylation of aniline.



[View Text Solution](#)

Hots

1. $CuSO_4$ on mixing with NH_3 (1:4 ratio) does not give test for Cu^{2+} ions but gives test for SO_4^{2-} ions why?



[Watch Video Solution](#)

Short Answers

1. How can the following conversion be effected?

Nitrobenzene to anisole.

 [Watch Video Solution](#)

2. How can the following conversion be effected?

Chloro benzene to phenyl hydrazine

 [Watch Video Solution](#)

3. How can the following conversion be effected?

Aniline to bezoic acid.



[Watch Video Solution](#)

 [View Text Solution](#)

4. How can the following conversion be effected?

Benzene diazonium chloride to ethyl benzene.

 [Watch Video Solution](#)

5. How will you distinguish between primary secondary and tertiary aliphatic amines.

 [Watch Video Solution](#)

Long Answers

1. Write short notes on Carbylamine reaction .

 [Watch Video Solution](#)

 [Watch Video Solution](#)

2. Write short notes on the following

Maustard oil reaction

 [Watch Video Solution](#)

3. Write a note on

Acetylation of benzylamine.

 [View Text Solution](#)

4. Write a note on

Formation of Schiff's base.

 [View Text Solution](#)

5. Write a note on

Diazotisation reaction.



[Watch Video Solution](#)

6. Aniline does not undergo Friedel - Crafts reaction. Explain.



[Watch Video Solution](#)

7. Account for the following

Diazonium salts of aromatic amines are more stable than those of aliphatic amines.



[View Text Solution](#)

8. Account for the following

pK_b of aniline is more than that of methylamine.



[View Text Solution](#)

9. Write short notes on the following

Gabriel phthalimide synthesis



[Watch Video Solution](#)

10. Ethylamine is soluble in water whereas aniline is not . Give reason.



[Watch Video Solution](#)

11. Account for the following

Amines are more basic than amides.



[View Text Solution](#)

12. Account for the following

Although amino group is o - and p - directing in aromatic electrophilic substitution reactions, aniline on nitration gives a substantial amount of m - nitroaniline.



[View Text Solution](#)