



CHEMISTRY

BOOKS - PREMIERS PUBLISHERS

ORGANIC NITROGEN COMPOUNDS

Evaluate Yourself

1. Write all possible isomers for the compound. $C_2H_5 - NO_2$



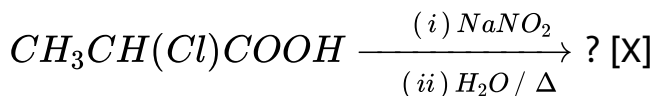
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2. Write all possible isomers for the compound. $C_3H_7 - NO_2$



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3. Find out the product of the reaction



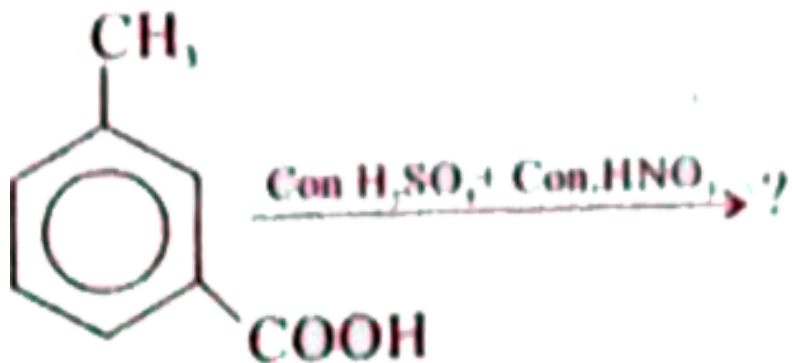
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4. Find out the product of the reaction



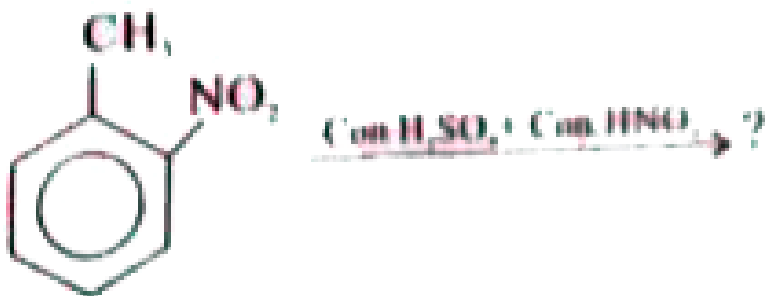
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5. Predict the major product that would be obtained on nitration of the compound.



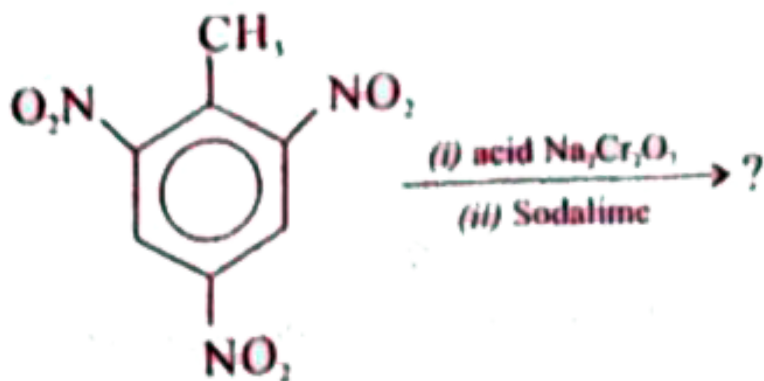
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6. Predict the major product that would be obtained on nitration of the compound.



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



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8. Draw the structure of the compound

Neopentylamine

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9. Draw the structure of the compound

Tert- butylamine



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10. Draw the structure of the compound

α - amino propionaldehyde



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11. Draw the structure of the compound

Tribenzylamine



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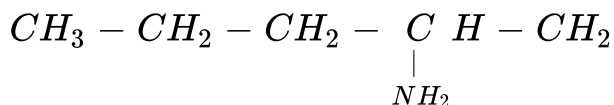
12. Draw the structure of the compound

N-ethyl - N - methylhexan - 3 - amine



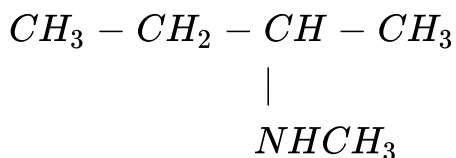
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13. Give the correct IUPAC name for the amine :



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14. Give the correct IUPAC name for the amine :



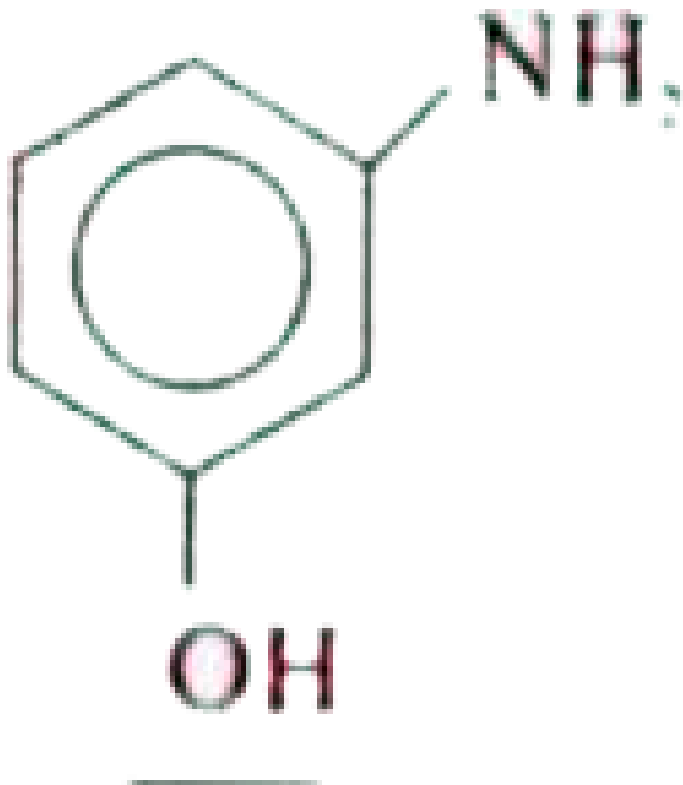
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15. Give the correct IUPAC name for the amine :



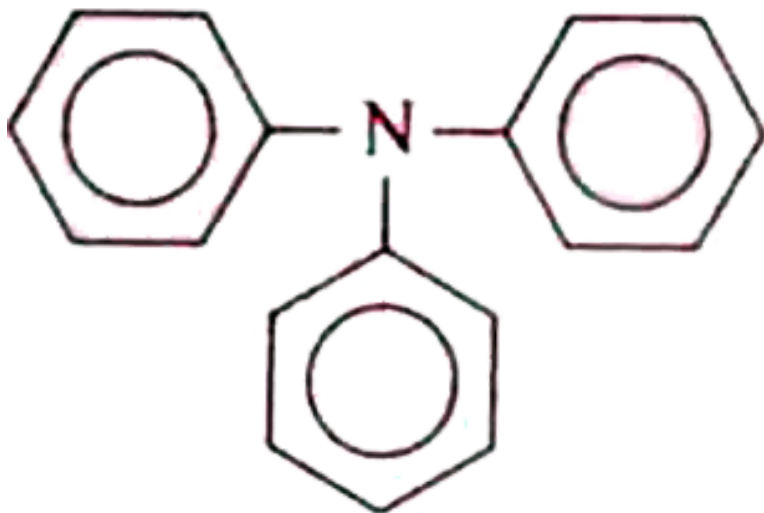
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16. Give the correct IUPAC name for the amine :



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17. Give the correct IUPAC name for the amine :



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Evaluation Textbook Questions Answers 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



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2. The method by which aniline cannot be prepared as :

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

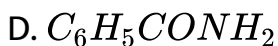
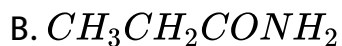
D. reduction of nitrobenzene by Sn/HCl

Answer: B



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



Answer: A



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

Reason : Bromine catalyses hydrolysis of acetamide .

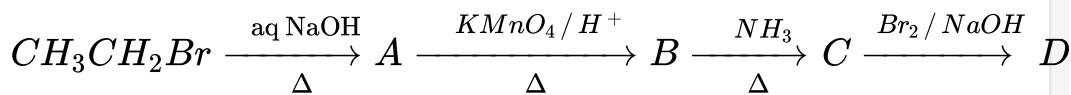
- A. if both assertion and reason are true and reason is the correct explanation of assertion .
- B. if both assertion and reason are true but reason is not the correct explanation of assertion .
- C. assertion is true but reason is false
- D. both assertion and reason is false .

Answer: D



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5.



'D' is

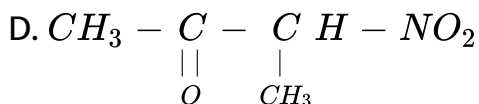
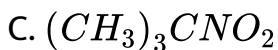
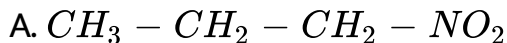
- A. bromomethane
- B. α -bromo sodium acetate
- C. methanamine
- D. acetamide

Answer: C



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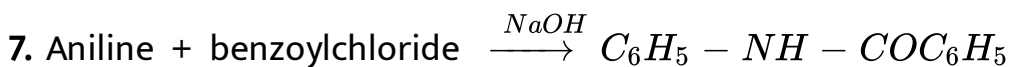
6. Which one of the following nitro compounds does not react with nitrous acid ?



Answer: C



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this reaction is known as :

A. Friedel - crafts reaction

B. HVZ reaction

C. Schotten- Baumann reaction

D. none of these

Answer: C



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

A. carboxylic acid

B. aromatic acid

C. schiff's base

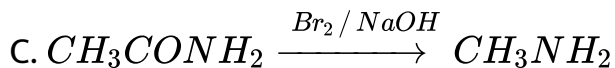
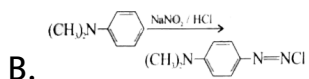
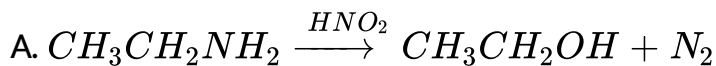
D. ketone

Answer: B



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9. Which of the following reaction is not correct ?



D. none of these

Answer: D



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

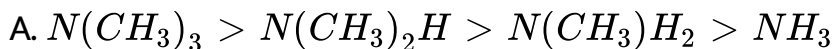
- A. o-aminoacetophenone
- B. m-aminoacetophenone
- C. p-aminoacetophenone
- D. acetanilide

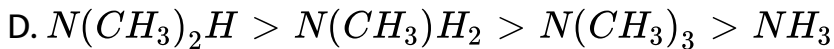
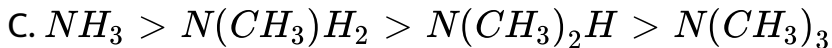
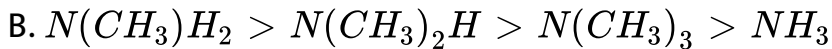
Answer: D



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

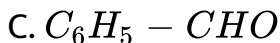
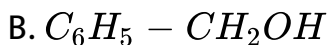
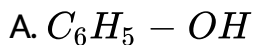
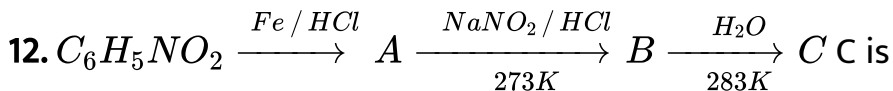




Answer: A



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Answer: D



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13. Nitrobenzene on reaction with Conc. HNO_3/H_2SO_4 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: B



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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



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15. Secondary nitro alkanes react with nitrous acid to form :

- A. red solution
- B. blue solution

C. green solution

D. yellow solution

Answer: D



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

A. t - butylamine

B. ethylamine

C. diethylamine

D. triethylamine

Answer: B



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17. Which one of the following is most basic ?

A. 2, 4- dichloroaniline

B. 2, 4-dimethylaniline

C. 2, 4 - dinitroaniline

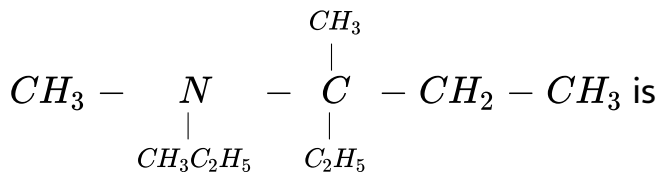
D. 2, 4- dibromoaniline

Answer: A



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18. IUPAC name for the amine



- A. 3-dimethylamino -3- methyl pentane
- B. 3 (N , N- Triethyl) - 3 - amino pentane
- C. 3 - N , N- trimethyl pentanamine
- D. 3- (N, N- Dimethyl amino) -3- methyl pentane

Answer: B



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19. Ammonium salt of benzoic acid is heated strongly with P_2O_5 and the product so formed is reduced and then treated

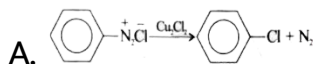
with $NaNO_2 / HCl$ at low temperature . The final compound formed is :

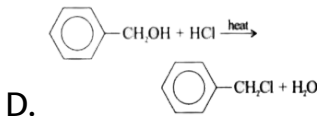
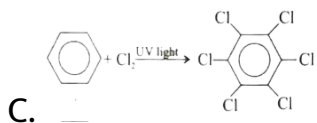
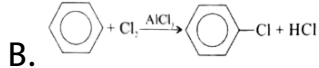
- A. Benzene diazonium chloride
- B. Benzyl alcohol
- C. Phenol
- D. Nitrosobenzene

Answer: A

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



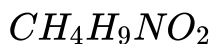


Answer: B

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Evaluation Textbook Questions Answers Answer The Following Questions

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



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



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3. What happens when
2 - Nitropropane boiled with HCl



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4. What happens when
Nitrobenzene undergo electrolytic reduction in strongly acidic
medium



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5. What happens when

Oxidation of tert-butylamine with $KMnO_4$



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6. What happens when

Oxidation of acetoneoxime with trifluoroperoxy acetic acid .



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7. How will you convert nitrobenzene into

1,3,5- trinitrobenzene



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8. How will you convert nitrobenzene into
o and p-nitrophenol



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9. How will you convert nitrobenzene into
m-nitro aniline



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10. How will you convert nitrobenzene into
azoxybenzene



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11. How will you convert nitrobenzene into hydrazobenzene



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12. How will you convert nitrobenzene into N-phenylhydroxy lamine



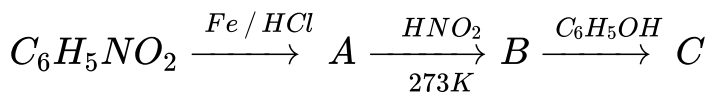
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13. How will you convert nitrobenzene into aniline



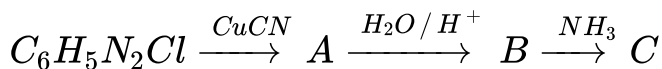
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14. Identify compounds A , B and C in the sequence of reaction .



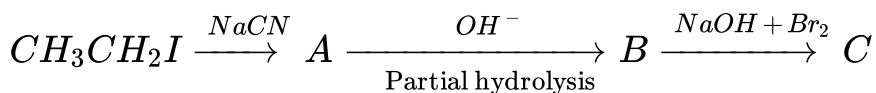
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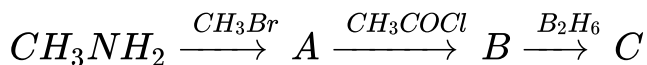
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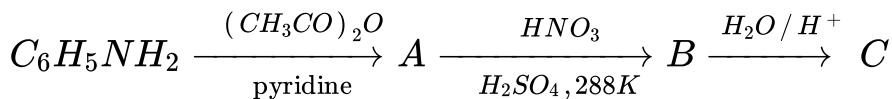
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17. Identify compounds A, B and C in the sequence of reaction .



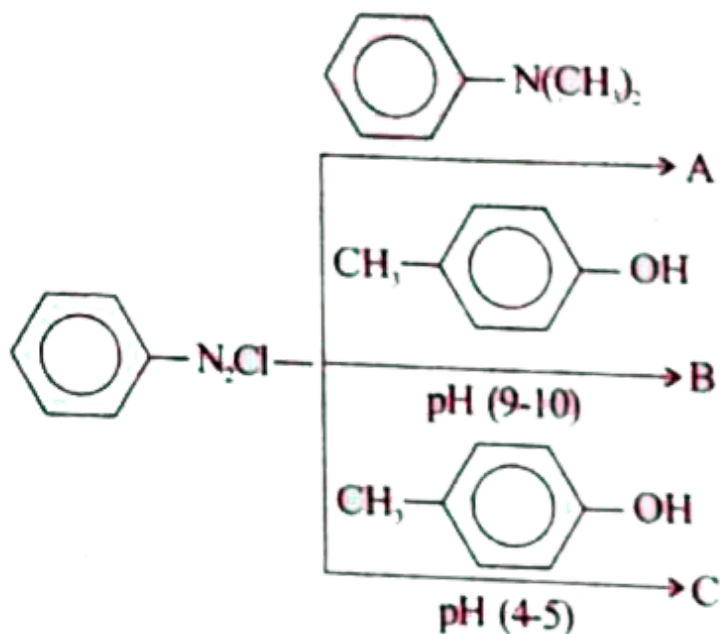
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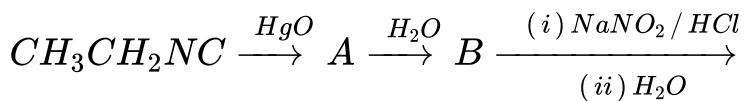
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19. Identify compounds A , B and C in the sequence of reaction .



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



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21. Write short note on Hoffmann's bromide reaction



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22. Write short note on Ammonolysis



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23. Write short note on Gabriel phthalimide synthesis



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24. Write short note on Schotten- Baumann reaction



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25. Write short note on Carbylamine reaction

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26. Write short note on Mustard oil reaction

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27. Write short note on Coupling reaction

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28. Write short note on Diazotisation

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29. Write short note on Gomberg reaction



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



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31. Account for Aniline does not undergo Friedel - Crafts reaction



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



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33. Account for pK_b of aniline is more than that of methylamine



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34. Account for Gabriel phthalimide synthesis is preferred for synthesising primary amines .



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



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36. Account for Amines are more basic than amides



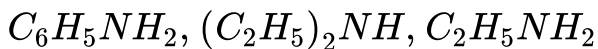
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37. Account for Although amino group is o-and p-directing in aromatic electrophilic substitution reactions , aniline on nitration gives a substantial amount of m-nitroaniline .



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38. Arrange In increasing order of solubility in water ,



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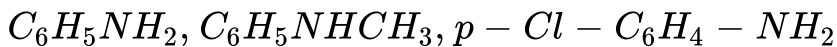
39. Arrange In increasing order of basic strength

aniline , p-toluidine and p-nitroaniline



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40. Arrange In increasing order of basic strength



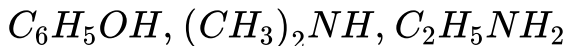
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41. Arrange In decreasing order of basic strength in gas phase



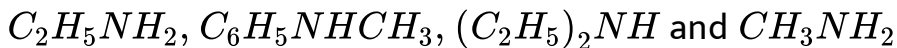
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42. Arrange In Increasing order of boiling point



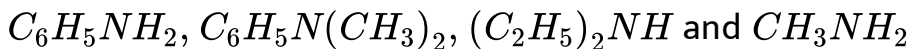
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43. Arrange In decreasing order of the pK_b values



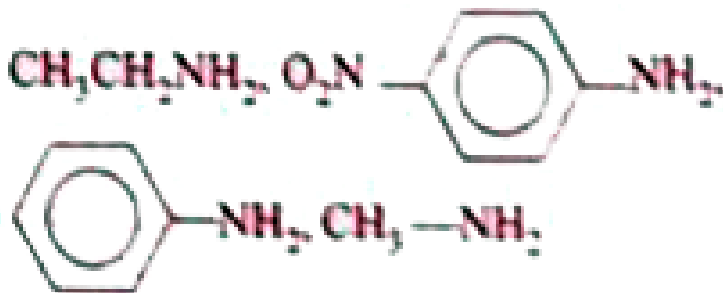
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44. Arrange In Increasing order of basic strength



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45. Arrange In decreasing order of basic strength



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

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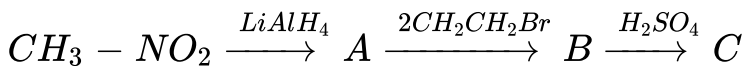
47. How will you prepare propan-1- amine from propanamide

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

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49. Identify A , B and C



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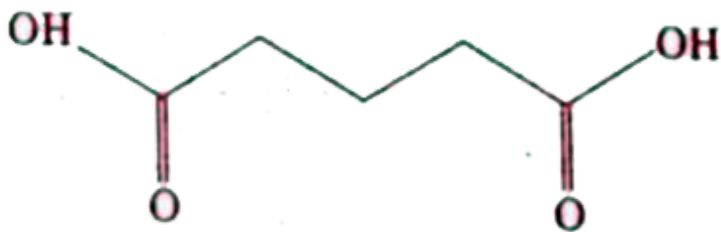
50. How will you convert diethylamine into N, N - diethylacetamide

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51. How will you convert diethylamine into N - nitrosodiethylamine

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52. Identify A , B and C



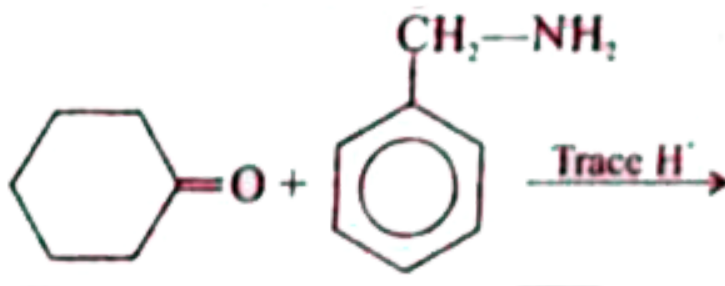
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53. Identify A, B and C. aniline + benzaldehyde $\rightarrow A \xrightarrow{\text{ConHNO}_3}$

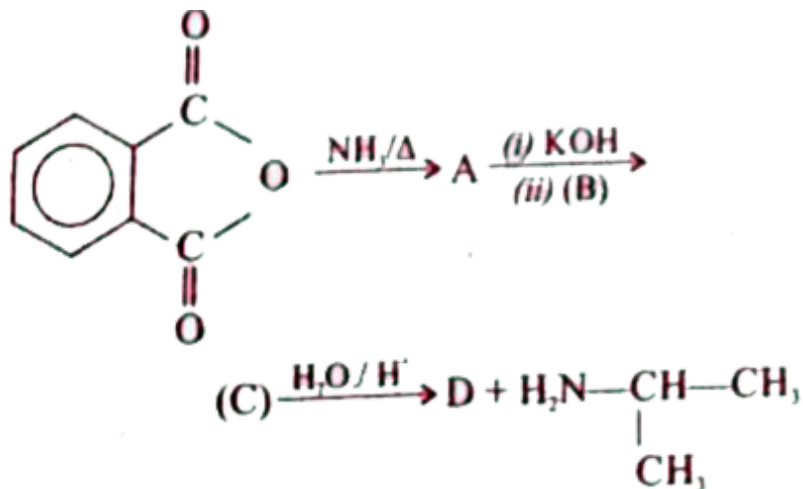
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54. Complete the following reaction



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



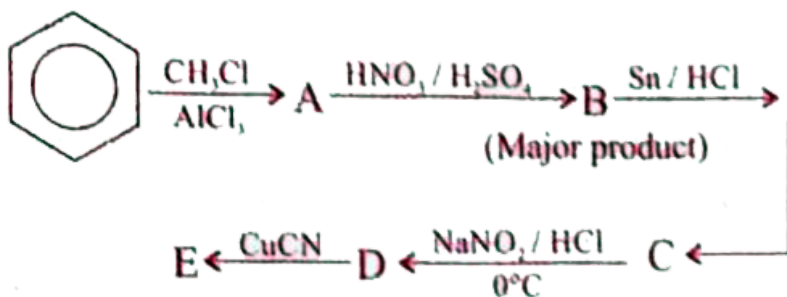
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56. A dibromo derivative (A) on treatment with KCN followed by acid hydrolysis and heating gives a monobasic acid (B) along with liberation of CO_2 . (B) on treating with liquid ammonia followed by heating with Br_2/KOH gives (C) which on treating with NaNO_2 and HCl gives a monobasic acid (D) having molecular mass 74. Identify A to D.



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



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Other Important Questions Answers Choose The Correct Answer

1. 1, 2 - dimethyl -1- nitropropane . Choose the incorrect statement about this compound .

A. It is a primary nitro compound .

B. It is also called nitroneopentane .

C. The NO_2 group is attached to a secondary carbon atom.

D. It is an aliphatic compound .

Answer: C



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2. 1-nitrobutane and 2- methyl -1- nitro propane :

A. chain isomers

B. position isomers

C. functional isomers

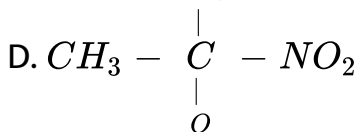
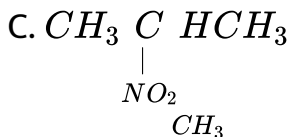
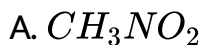
D. metamers

Answer: A



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3. Which of the following nitro compounds does not exhibit tautomerism ?



Answer: D



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4. The incorrect statement between nitroform and aciform of nitromethane is :

A. nitroform is less acidic where as aciform is more acidic .

B. nitroform dissolves in NaOH slowly while aciform dissolves in NaOH instantly .

C. Both decolorise $FeCl_3$ solution

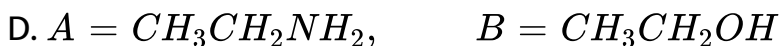
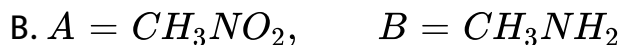
D. They are tautomers

Answer: C



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5. $CH_3CH = NOH \xrightarrow{CF_3COOH} A \xrightarrow{Sn / HCl} B$. Identify A and B .



Answer: A



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6. The products obtained by the reduction of nitromethane in acid medium and neutral medium are :

A. methylamine and N-methylhydroxylamine

B. methylamine and ethanol

C. N-methylhydroxylamine and methylamine

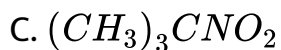
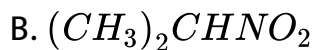
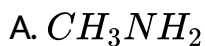
D. N-methylhydroxylamine in both cases .

Answer: A



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7. An amine is boiled with HCl and H_2O . Which of the following will give acetone :



D. both (b) and (c)

Answer: B



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8. The correct IUPAC name for $CH_2 = CH - CH_2NH - CH_3$

is

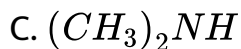
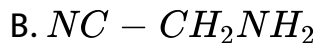
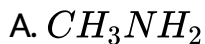
- A. Allylmethyl amine
- B. 2-amino-4-pentane
- C. 4 amino pent-1-ene
- D. N- methyl prop-2-en-1 amine

Answer: D



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9. Amongst the following the strongest base in aqueous medium is :



Answer: C



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10. In order to prepare a 1° amine from an alkyl halide with simultaneous addition of one CH_2 group in the carbon chain, the reagent used as a source of nitrogen is :



C. Potassium cyanide , KCN

D. Potassium phthalimide $C_6H_4(CO_2)N^- K^+$

Answer: C



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11. Best method for preparing primary amines from alkyl halides without changing the number of carbon atoms in the chain is :

A. Hoffmann bromamide

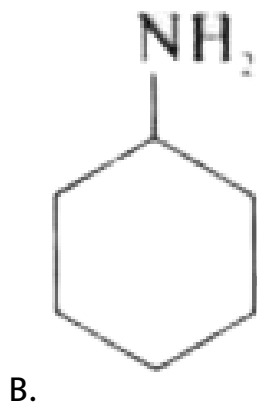
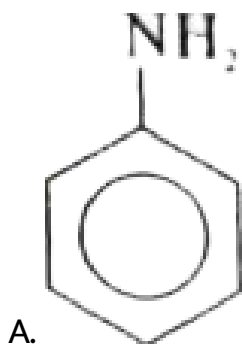
B. Gabriel's phthalimide synthesis

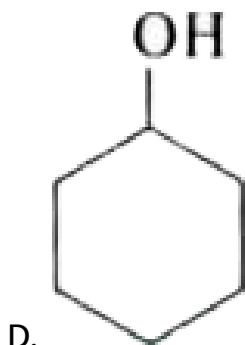
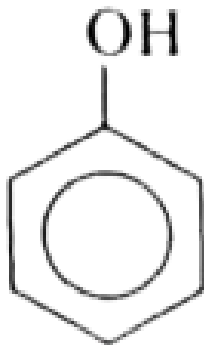
C. Sandmeyer's reaction

D. Reaction with NH_3

Answer: B

12. Which of the following compounds is the weakest Bronsted base ?





Answer: C

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

(I) Chlorobenzene (II) Bromobenzene

(III) Iodo benzene (IV) Fluoro benzene

A. (IV)

B. (III)

C. (I) and (II)

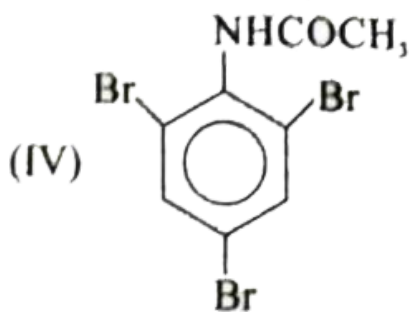
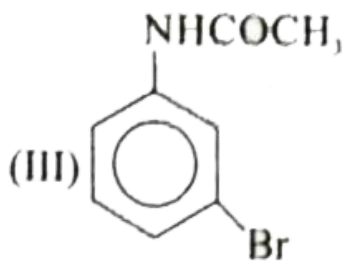
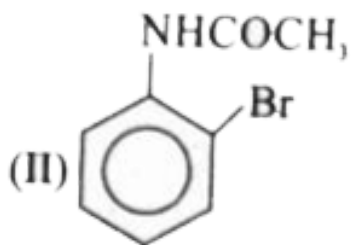
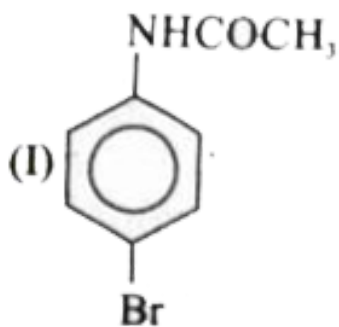
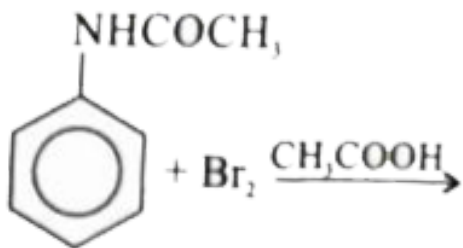
D. (III) and (IV)

Answer: A



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14. The products of the following reaction are :



A. (iv)

B. (III)

C. (I) AND (II)

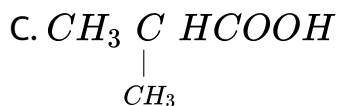
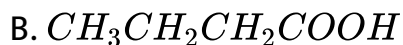
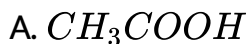
D. (III) and (IV)

Answer: C



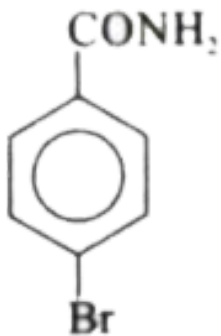
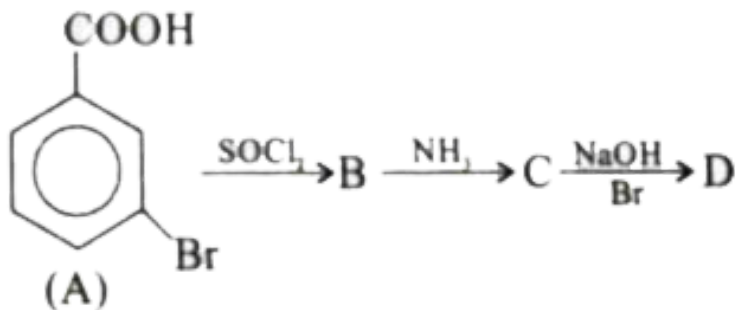
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15. An organic compound 'A' on treatment with NH_3 gives B which on heating gives C, C when treated with Br_2 in the presence of KOH produces ethylamine. The compound A is

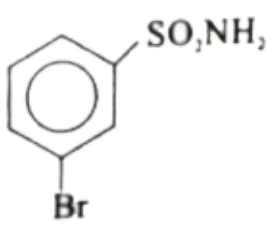


Answer: D

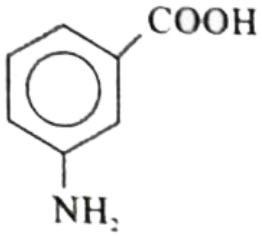
16. In a set of reactions, meta mono benzoic acid gave a product 'D'. Identify D.



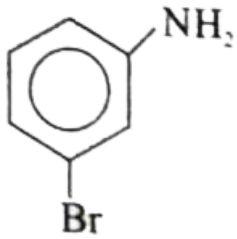
A.



B.



C.

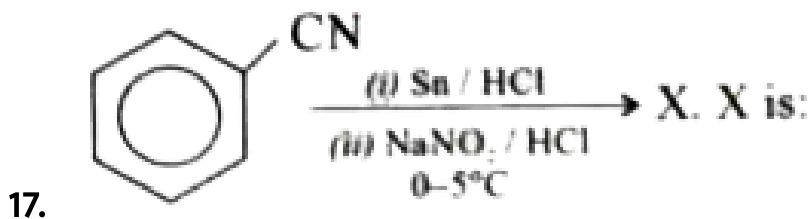


D.

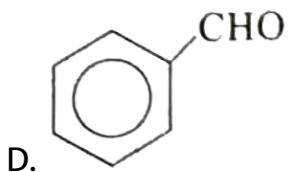
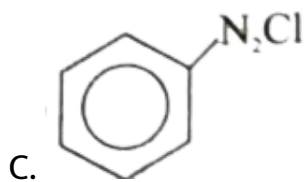
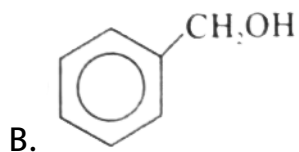
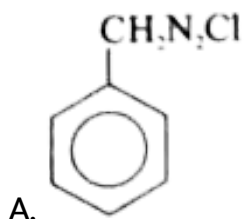
Answer: D



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X is

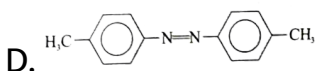
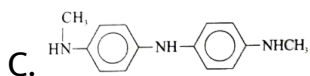
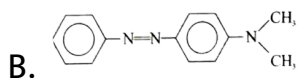
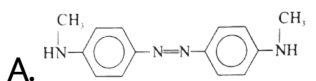
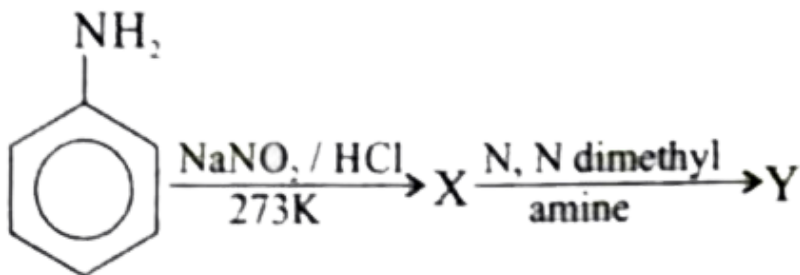


Answer: B



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18. Aniline in a set of following reactions yielded a coloured product Y . The structure of Y would be :



Answer: B



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19. Butylamine (I) , diethyl amine (II) and N , N diethyl amine , (III) have the same molar mass . The increasing order of their boiling points is :

A. $III < II < I$

B. $I < II < III$

C. $II < III < I$

D. $III < I < II$

Answer: A



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20. Assertion : Ammonolysis of alkyl halides is not a suitable method for the preparation of primary amines .

Reason : Ammonolysis of alkyl halides mainly produces 2° amines .

- A. Both assertion and reason are true and reason is the correct explanation of assertion.
- B. Both assertion and reason are true and reason is not the correct explanation of assertion .
- C. Assertion is true but reason is false
- D. Both assertion and reason is false .

Answer: C



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21. Assertion : Gabriel phthalimide reaction can be used to prepare aryl and arylalkyl amines .

Reason : Aryl halides are as reactive as alkyl halides towards nucleophilic substitution reactions .

- A. Both assertion and reason are true and reason is the correct explanation of assertion.
- B. Both assertion and reason are true and reason is not the correct explanation of assertion .
- C. Assertion is true but reason is false
- D. Both assertion and reason is false .

Answer: D



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22. Assertion : Aniline does not undergo Friedel Craft's reaction

.

Reason : Friedel crafts reaction is an electrophilic substitution reaction .

- A. Both assertion and reason are true and reason is the correct explanation of assertion.
- B. Both assertion and reason are true and reason is not the correct explanation of assertion .
- C. Assertion is true but reason is false
- D. Both assertion and reason is false .

Answer: B



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Other Important Questions Answers Answer The Following Questions

1. Classify 1,2 , dimethyl -1-nitropropane aliphatic or aromatic nitro compounds.



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2. Classify 2-nitro-1-methyl benzene aliphatic or aromatic nitro compounds.



[View Text Solution](#)

3. Classify 1 ,3 , 5 trinitro benzene aliphatic or aromatic nitro compounds.



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4. Classify 2 - phenyl - 1- nitro ethane aliphatic or aromatic nitro compounds.



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5. Classify 2 - methyl - 2- nitro propane aliphatic or aromatic nitro compounds.



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6. What are nitro compounds ? How are they classified ? Give one example for each type .



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7. Write the structural formula of the isomers of the compound and indicate the type of isomerism is involved .

1 - nitrobutane .



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8. Write the structural formula of the isomers of the compound and indicate the type of isomerism is involved .

nitroethane .



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9. Methyl nitrite and nitro methane exhibits tautomerism . How will you distinguish between these form ?



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10. Between 2-nitrobenzene , and 2-methyl - 2- nitro propane which does not exhibit tautomerism ? Why ?



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11. Explain the acidic nature of nitroalkanes .



[View Text Solution](#)

12. How will you prepare nitro benzene from ethyl bromide



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13. How will you prepare nitro benzene from methane



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14. How will you prepare nitro benzene from α - chloroacetic acid



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15. How will you prepare nitro benzene from tert-butyl amine



[View Text Solution](#)

16. How will you prepare nitro benzene from acetaldoxine .



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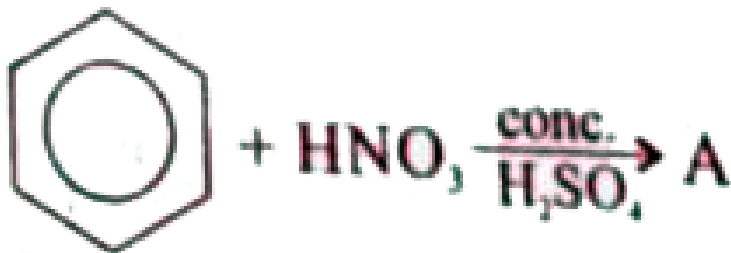
17. Give equation for the reduction of nitro methane in acid medium

 [View Text Solution](#)

18. Give equation for the reduction of nitro methane in neutral medium .

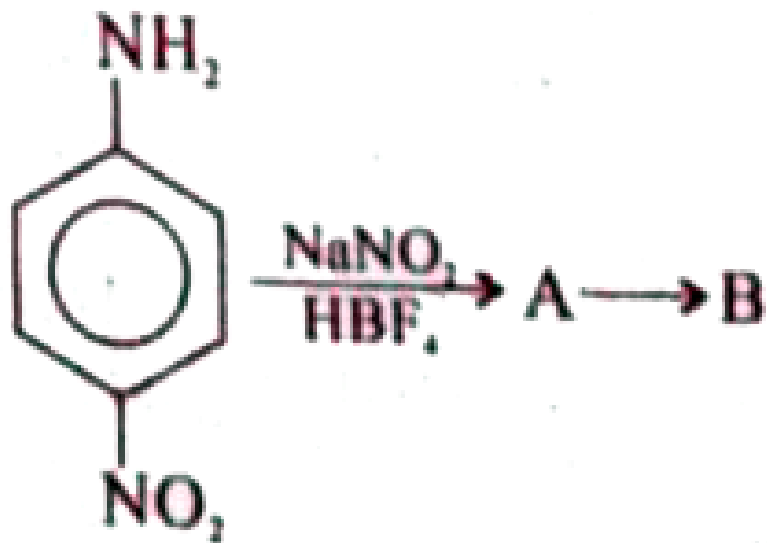
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19. Complete the equation . Identify A , B and C .



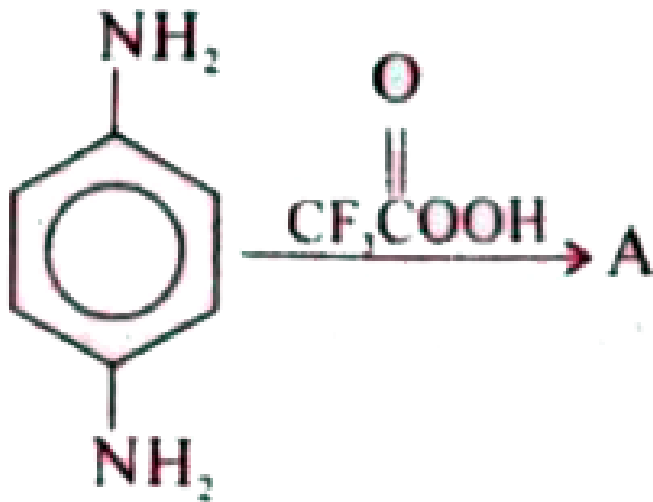
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20. Complete the equation . Identify A , B and C .



 [View Text Solution](#)

21. Complete the equation . Identify A , B and C .



[View Text Solution](#)

22. How does ethyl nitrite react with Sn/HCl

[View Text Solution](#)

23. How does ethyl nitrite react with $\text{HCl}/\text{H}_2\text{O}$



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24. What is Nef carbonyl synthesis ? Give equation .



[View Text Solution](#)

25. How are the conversion made ? Benzene to meta dinitro benzene



[View Text Solution](#)

26. How are the conversion made ? Nitro benzene to nitroso benzene



[View Text Solution](#)

27. How are the conversion made ? Nitro benzene to azo benzene



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28. How are the conversion made ? Nitro benzene to hydrazo benzene .



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29. Identify the reagents used in the conversion . Write complete equation nitrobenzene to aniline.



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30. Identify the reagents used in the conversion . Write complete equation

metadinitrobenzene to metanitroaniline

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31. Identify the reagents used in the conversion . Write complete equation

nitrobenzene to 3-nitrobenzene sulphonic acid .

 [View Text Solution](#)

32. Explain why nitro group in nitro benzene is meta directing .

 [View Text Solution](#)

33. How will you effect the conversion

Benzene to m-chloro nitro benzene



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34. How will you effect the conversion

Benzene to 1,2,3 tri nitro benzene to m-chloro aniline



[View Text Solution](#)

35. How will you effect the conversion

m-chloro nitro benzene to m-chloro aniline



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36. How will you effect the conversion

1, 3 , di nitrobenzene to 3 - nitro aniline .



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37. Give the IUPAC name of $C_6H_5NHC_6H_5$



[View Text Solution](#)

38. Give the IUPAC name of $C_6H_5 - N - C_6H_5$
 $\quad \quad \quad |$
 $\quad \quad \quad C_6H_5$



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39. Give the IUPAC name of $C_6H_5 - N \overset{CH_3}{\underset{|}{C}} - CH_2CH_3$



[View Text Solution](#)

40. Give the IUPAC name of $CH_2 = CH - CH_2NH_2$



[View Text Solution](#)

41. Give the IUPAC name of $NH_2 - (C_2)_6NH_2$



[View Text Solution](#)

42. Give the IUPAC name of $CH_3NHCH(CH_3)_2$



[View Text Solution](#)

43. Give the IUPAC name of $C_2H_5 - \underset{\substack{| \\ C_2H_5}}{N} - CH_2CH_2CH_2CH_3$

 [View Text Solution](#)

44. Give the IUPAC name of $CH_3 - \underset{\substack{| \\ C_2H_5}}{N} - \overset{\substack{CH_3 \\ |}}{C}H - CH_3$

 [View Text Solution](#)

45. Give the IUPAC name of $C_6H_5N(CH_3)_2$

 [View Text Solution](#)

46. Give the IUPAC name of $C_6H_5CH_3NH_2$

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 [View Text Solution](#)

47. Write the structures of the chain isomers of Butan-1- amine .

 [View Text Solution](#)

48. Explain metamerism with a suitable example of amines .

 [View Text Solution](#)

49. What are all the possible isomers of an amine having the molecular formula C_3H_9N and $C_4H_{11}N$

 [View Text Solution](#)

50. Write the structure of 4 N- dimethyl pentan-2- amine

 [View Text Solution](#)

51. Write the structure of 2 (N , N - dimethyl) butanamine

 [View Text Solution](#)

52. Write the structure of 2 - aminoethanol

 [View Text Solution](#)

53. Write the structure of 4 - aminobutanoic acid

 [View Text Solution](#)

54. Write the structure of N -methyl - 2 - nitro pentanamine



[View Text Solution](#)

55. Write the structure of prop-2-en-1- amine



[View Text Solution](#)

56. Write the structure of N - ethyl - N - methylbenzenamine



[View Text Solution](#)

57. Write the structure of 3 - methylbenzenamine



[View Text Solution](#)

58. Write the structure of 2 - methoxybenzenamine

 [View Text Solution](#)

59. Write the structure of N- phenylbenzenamine

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60. How is ethanamine prepared from nitroethane

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61. How is ethanamine prepared from ethanenitrile

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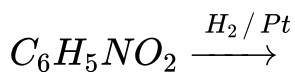
62. How is ethanamine prepared from acetamide

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63. How is ethanamine prepared from ethyl bromide ?

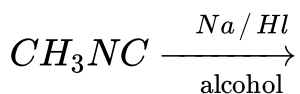
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64. Identify the product :



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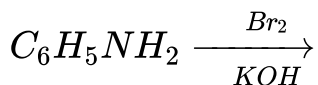
65. Identify the product :





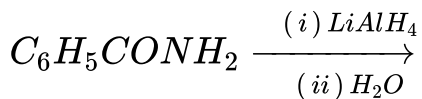
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66. Identify the product :



[View Text Solution](#)

67. Identify the product :



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68. Using sodium azide (NaN_3) convert methyl bromide to methyl amine .



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69. How will you prepare aniline from chloro benzene

 [View Text Solution](#)

70. How will you prepare aniline from phenol

 [View Text Solution](#)

71. What happens when

Vapours of ethanol and ammonia are passed over alumina

 [View Text Solution](#)

72. What happens when Ethanamide is treated with $LiAlH_4$.

Give equation



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73. Explain why ?

Amines have higher boiling points than hydrocarbons of comparable molecular mass.



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74. Explain why ?

Among isomeric amines 3° amines have the lowest melting point .



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75. Explain why ?

The boiling point of amines are lower than those of alcohols and acids of comparable molecular mass .



[View Text Solution](#)

76. Explain why ?

Aliphatic amines with maximum six carbon atoms are soluble in water to some extent while aromatic amines are insoluble in water .



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77. Account for the fact that among ethyl amines , the decreasing order of basicity in aqueous solution is $(CH_3CH_2)_2NH > (CH_3CH_2)_3N > CH_3CH_2NH_2$

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78. How does nitrous acid (a mixture of sodium nitrite and dil, HCl) react with (i) CH_3CH_2 (ii) $(CH_3)_3NH$ and (iii) $(CH_3)_3$? Give equations.

 [View Text Solution](#)

79. How does nitrous acid react with ethylamine ? Give equations

 [View Text Solution](#)

80. How does nitrous acid react with di-ethylamine ? Give equations

 [View Text Solution](#)

81. How does nitrous acid react with triethyl amine ? Give equations

 [View Text Solution](#)

82. How does nitrous acid react with aniline ? Give equations

 [View Text Solution](#)

83. How does nitrous acid react with N- methyl aniline ? Give equations



[View Text Solution](#)

84. How does nitrous acid react with N, N- dimethylaniline ?
Give equations



[View Text Solution](#)

85. Explain why amino group is ortho para directing in electrophilic substitution reactions .



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86. Aniline gives 2, 4, 6 tribromo aniline when treated with bromine water, but not a monobromo aniline. Explain. Why?



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87. Why is it necessary to acetylate aniline to get a monobromo aniline?



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88. Explain why direct nitration of aniline gives a mixture of ortho, meta and para isomers.



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89. How will you convert aniline ?

to p-bromo aniline



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90. How will you convert aniline ?

to 2,4,6 tribromo aniline



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91. How will you convert aniline ?

to para nitro aniline



[View Text Solution](#)

92. How will you convert aniline ?

to benzene diazonium chloride



[View Text Solution](#)

93. How will you convert aniline ?

to sulphanilic acid



[View Text Solution](#)

94. What is zwitter ion ? Explain with an example



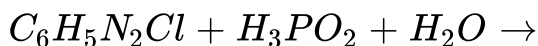
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95. How will you distinguish between primary , secondary and tertiary amines ?



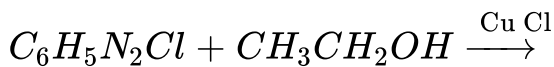
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96. Complete the reaction :



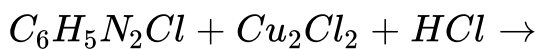
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97. Complete the reaction :



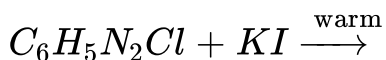
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98. Complete the reaction :



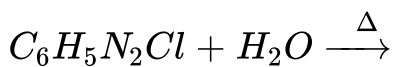
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99. Complete the reaction :



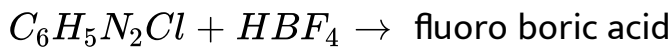
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100. Complete the reaction :



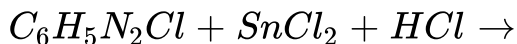
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101. Complete the reaction :



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102. Complete the reaction :



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103. Give example for Sandmeyer's reaction



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104. Give example for Gattermann reaction



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105. How does the reagent react with benzene diazonium chloride ? Give equation

HBF_4 and the product formed is heated .



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106. How does the reagent react with benzene diazonium chloride ? Give equation

HBF_4 and the product formed is heated with aqueous solution of sodium nitrite in the presence of copper .



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107. How does the reagent react with benzene diazonium chloride ? Give equation

HBF_4 and the product is heated with CH_3COOH



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108. How does the reagent react with benzene diazonium chloride ? Give equation

Cuprous cyanide in the presence of KCN.



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109. Accomplish the conversion

Nitrobenzene to benzene



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110. Accomplish the conversion

4-Nitro aniline to 1, 2, 3 - tribromo benzene



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111. Accomplish the conversion

p-toludine to 2-bromo - 4- methyl aniline



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112. Accomplish the conversion

m-nitro aniline to m- chloroaniline



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113. Accomplish the conversion

p-nitroaniline to p-iodonitro benzene



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114. Accomplish the conversion

benzyl chloride to 2 - phenyl ethanamine .



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115. Give equation for the reaction.

Ethyl bromide is treated with KCN



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116. Give equation for the reaction.

Heating acetamide with P_2O_5



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117. Give equation for the reaction.

Heating acetaldoxime with P_2O_5



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118. Give equation for the reaction.

Treating methyl magnesium bromide with cyanogen chloride .



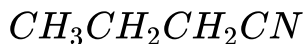
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119. Write the IUPAC names of the following



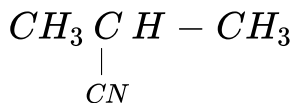
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120. Write the IUPAC names of the following



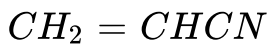
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121. Write the IUPAC names of the following



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122. Write the IUPAC names of the following



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123. Write the IUPAC names of the following



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124. What is the reducing agent used in the following reduction reactions . Give equations

(i) Ethanenitrile to ethanamine

(ii) Benzonitrile to benzylamine

(iii) Ethane nitrile to Acetaldimine hydrochloride which on hydrolysis gives acetaldehyde.



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125. Give examples for Thrope nitrile condensation



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126. Give examples for Levine and Hauser acetylation



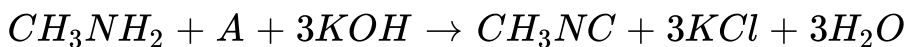
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127. Write the electronic structure of alkyl cyanides and isocyanides .



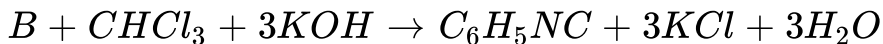
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128. Name the reagents used in the reaction.



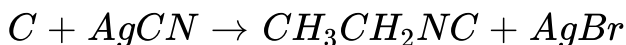
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129. Name the reagents used in the reaction.



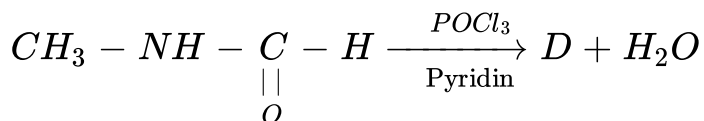
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130. Name the reagents used in the reaction.



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131. Name the reagents used in the reaction.



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132. What happens when methyl isocyanide is :

treated with dilute HCl .

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133. What happens when methyl isocyanide is :

treated with sodium and alcohol

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134. What happens when methyl isocyanide is :
heated at $250^{\circ}C$



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135. What happens when methyl isocyanide is :
treated with sulphur in the presence of ozone .



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136. Mention the use of Nitro alkanes



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137. Mention the use of Nitrobenzene



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138. Mention the use of Cyanides and isocyanides



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139. An organic compound (A) having the molecular formula C_2H_7N is treated with nitrous acid to give (B) of molecular formula C_2H_6O which answers iodoform test . Identify A and B and explain the reactions .



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140. 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 compound A, B and C. Write the equations.



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