



CHEMISTRY

BOOKS - MARVEL CHEMISTRY (HINGLISH)

ORGANIC COMPOUNDS CONTAINING NITROGEN

Mcq

1. In liquid phase nitration of alkanes mainly forms

- A. mononitro compounds
- B. dinitro compounds
- C. trinitro compounds
- D. polynitro compounds

Answer: D



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2. Good yield of nitroalkane from alkyl halide and KNO_2 are obtained in presence of solvent

- A. dimethyl ether
- B. dimethyl sulphoxide
- C. N,N-dimethyl formamide
- D. N,N-dimethyl formamide of dimethyl sulphoxide

Answer: D

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3. Trifluoroperoxyacetic acid is used to prepare nitroalkane from

- A. Oxime
- B. Amine

C. R-X

D. R-OH

Answer: A



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4. Isonitroform is also known as

A. Nitronic acid

B. Nitric acid

C. Nitric acid

D. Nitrate acid

Answer: A



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5. Aldehydes and ketones are obtained by the action of sulphuric acid on sodium salt of _____ form alkyl nitrate .

- A. Nitro form
- B. Pseudo- acid form
- C. Base- form
- D. Aci- form

Answer: D



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6. Sodium salt of aci- form of nitro alkane when treated with 50% H_2SO_4 gives- CHO or $>C=O$ compounds. This is known as

- A. Nef carbonyl synthesis
- B. Sandmeyer synthesis
- C. Balz synthesis

D. Gattermann synthesis

Answer: A



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7. Trichloronitromethane is an / a

A. insecticide

B. weed controller

C. solvent

D. fertilizer

Answer: A



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8. Red coloured nitroso- nitroalkane is formed by the action of following on primary nitroalkane

A. First HNO_2 then $NaOH$

B. First $NaOH$ then HNO_2

C. Only HNO_2

D. only $NaOH$

Answer: A



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9. Tertiary nitroalkane do not react with HNO_2 because

A. It contains α – hydrogen atom

B. in contains β – hydrogen atom

C. it does not contain α – hydrogen atom

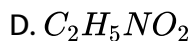
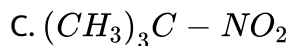
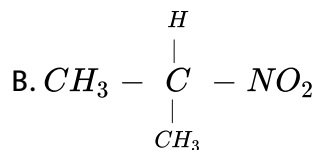
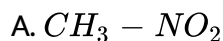
D. in contains lone pair of electron

Answer: C



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10. Which of the following ntiroalkane can give only blue coloured nitroso-alkane with HNO_2

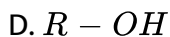
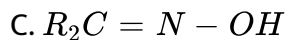
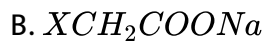
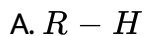


Answer: B



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11. Which of the following is not used in the preparation of nitroalkane ?

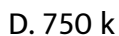
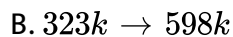
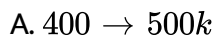


Answer: D



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12. Vapour phase nitration of alkane takes place at temperature

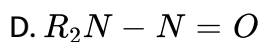
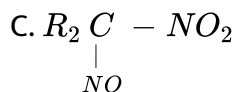
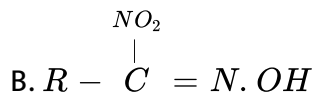
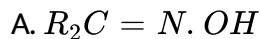


Answer: C



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13. Which of the following structures represent nitrolic acid ?



Answer: B



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14. Presence of a nitro group in a benzene ring:

A. renders the ring basic

B. deactivates the ring towards nucleophilic substitution

C. deactivates the ring towards electrophilic substitution

D. activates the ring towards electrophilic substitution

Answer: C



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15. 

A. 

B. 

C. 

D. 

Answer: B



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16. The hybridization of N- atom in amine is

A. sp

B. sp^2

C. sp^3

D. no hybridization

Answer: C



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17. Amines with respect to Ammonia are

A. Dialkyl derivatives

B. Monoalkyl derivative

C. Trialkyl derivatives

D. All of these

Answer: D



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18. The number of electrons in the valence shell of nitrogen in an amine is

A. 5

B. 6

C. 7

D. 8

Answer: D



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19. Tertiary amine contains

A. $-NH_2$ group

B. $>NH$ group

C. $>N$ group

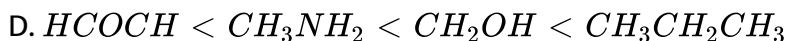
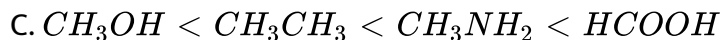
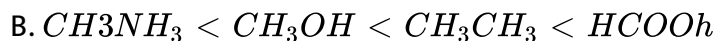
D. $-NO_2$ group

Answer: C



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20. Boiling points of the following compounds follow the order



Answer: A



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21. How many primary amines are possible for the formula $C_4H_{11}N$

A. 1

B. 2

C. 3

D. 4

Answer: D



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22. A secondary amine is

A. an organic compound with two $-NH_2$ groups

B. a compound with two carbon atoms and an $-NH_2$ group

C. a compound with an $-NH_2$ group on the carbon atom in number 2 position

D. a compound in which two of the hydrogen of NH_3 have been replaced by organic groups

Answer: D



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23. Which of the following is secondary amine ?

A. Dimethyl amine

B. Aniline

C. Isobutyl amine

D. Sec- butyl amine

Answer: A



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24. C_3H_9N cannot represent

A. 1^0 amine

B. 2^0 amine

C. 3^0 amine

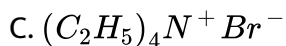
D. quarternary

Answer: D



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25. Which of the following is quarternary ammonium salt ?



D. Both (b) and (C)

Answer: D



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26. Quaternary ammonium salt contains how many coordinate bonds ?

- A. One
- B. Two
- C. Three
- D. Zero

Answer: A



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27. Possible isomers of C_3H_9N are

- A. Three
- B. Four
- C. Five
- D. Six

Answer: B



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28. Quaternary ammonium salts are

- A. Tetraalkyl ammonium halide
- B. Trialkyl ammonium halide
- C. Dialkyl ammonium halide
- D. Alkyl ammonium halide

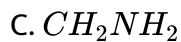
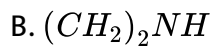
Answer: A



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29. Dimethyl amine is a functional isomer of

- A. $\text{CH}_3\text{CH}_2\text{NH}_2$



Answer: A



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30. n-butyl amine and isobutyl amine are

A. Stereo isomers

B. Chain isomers

C. Position isomers

D. Functional isomers

Answer: B



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31. Which of the following amine attract insect ?

- A. Trimethyl amine
- B. Methyl amine
- C. Dimethyl amine
- D. Tetra methyl ammonium chloride

Answer: A



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32. C_3H_9N represents a

- A. Primary amine
- B. Secondary amine
- C. Tertiary amine
- D. All the above

Answer: D



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33. Lower amines are soluble in water. This statements is

A. False

B. 1

C. Either (a) or (b)

D. Cannot say

Answer: B



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34. Molecular formula C_2H_7N represent

A. 2^0 and 3^0 amines

B. 1^0 and 2^0 amines

C. Only 1^0 amines

D. only 2^0 amines

Answer: B



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35. Isomerism shown by amines is_____.

A. chain

B. position

C. function

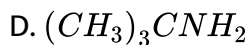
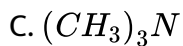
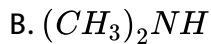
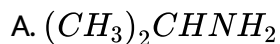
D. all of the

Answer: D



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36. Which of the following is secondary amine ?



Answer: B



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37. The bond (s) present in quaternary ammonium salt is

A. covalent

B. ionic

C. covalent , ionic and co- ordinate

D. covalent and co-ordinate

Answer: C



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38. No. of σ and π bonds contains Allyl isocyanide are _____ and _____.

A. 9σ and 3π

B. 9σ and 9π

C. 3σ and 4π

D. 5σ and 7π

Answer: A



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39. The number of possible structures of amines (C_7H_9N) having one benzene ring is

A. 3

B. 4

C. 5

D. 6

Answer: C



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40. The IUPAC name of the compound CH_3NHCH_3 is

A. Ethanamine

B. N- Ethanamine

C. N- methylmethanamine

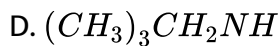
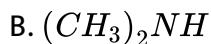
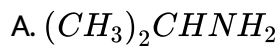
D. N- Methylmethanamine

Answer: C



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41. The structural formula of methylamino methane is



Answer: B



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42. The IUPAC Name of $CH_3CH_2\underset{\substack{| \\ CH_3}}{CH} - NH_2$

A. 2- aminobutane

B. 1-methyl -1- aminopropane

C. 3-methyl -3- aminopropane

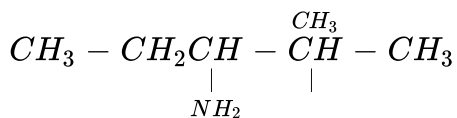
D. 1- aminobutane

Answer: A



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43. The IUAC name of the give compound is



A. 2-methyl -3- aminopentane

B. 2- methyl- pentan -3- amine

C. 2 (N, N -dimethylamino) butane

D. 2,4- dimethylbenzenamine

Answer: B



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44. The IUPAC name of the compound CH_3NHCH_3 is

- A. Dimethylamine
- B. 2-aminopropane
- C. N- methylmethanamine
- D. N-Methylaminomethane

Answer: C



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45. Dimethanamine is the IUPAC name of

- A. $(C_2H_5)_2NH_2$
- B. $(CH_3)_2NH$
- C. $(C_2H_5)NH$
- D. $(CH_3)_2CO$

Answer: B



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46. The IUPAC name of $CH_3 - NH - C_2H_5$ is

- A. N- Methyl ethyl amine
- B. N- Ethyl methanamine
- C. N- Methyl ethanamine
- D. N-Ethyl methyl amine

Answer: C



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47. The IUPAC name of $CH_3 - CH(NH_2) - CH_3$

- A. 2- amino propane

- B. propan -2- amine
- C. Secondary propyl amine
- D. both (a) and (b)

Answer: D



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48. IUPAC name of $(CH_3)_2N - C_2H_5$ is

- A. Dimethyl ethanamine
- B. N, N dimethyl ethanamine
- C. Ethyl dimethylamine
- D. both (a) and (b)

Answer: B



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49. The IUPAC name of the compound $(CH_3)_3N$ is

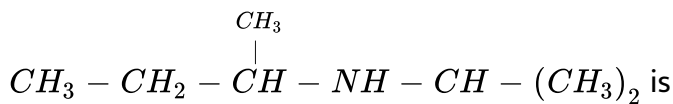
- A. N,N- Dimethyl methanamine
- B. Trimethyl amine
- C. Dimethyl methanamine
- D. Trimethyl methanamine

Answer: A



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50. The IUPAC name of



- A. N- isobutyl dimethanamine
- B. N-iso-propy - butan -2- amine
- C. N-dimethyl butanamine

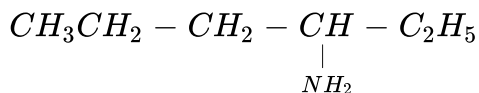
D. N-n- propyl- butan-2- amine

Answer: B



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51. The IUPAC name of the compound



A. Ethyl propanamine

B. Ethyl propylamine

C. Hexan-3-amine

D. Pentan-2- amine

Answer: C



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52. The IUPAC name of $CH_3N(C_2H_5)_2$

A. diethyl methyl amine

B. diethyl methanamine

C. methyl diethanamine

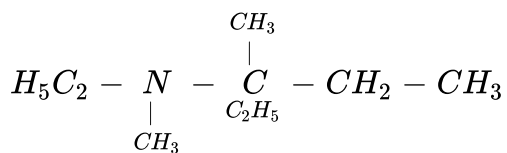
D. ethyl methyl amine

Answer: C



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53. Select the IUPAC name of the following :



A. N-methyl ,N- ethyl -3- pentane-3- amine

B. N-methyl ,N- methyl -3- ethyl -3- methyl - propane-1 amine

C. N-ethyl ,N-methyl -3- methyl -pentane-3- amine

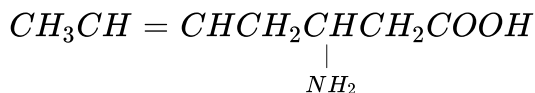
D. N-methyl ,N- ethyl -3- methyl-3- ethyl -propane-1- amine

Answer: C



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54. The *IUPAC* name of the compound



is

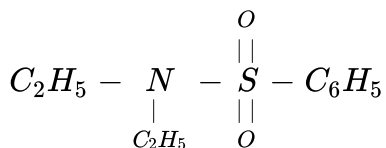
- A. 5- amino-2-heptenoic acid
- B. 3-aminohept-5- enoic acid
- C. 5-amino -hex-2-ene- carboxylic acid
- D. β – amino-8- heptenoic acid

Answer: B



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55. Select the IUPAC name of the following



A. N, N- diethyl benzene sulphonyl amine

B. N, N- diethyl - phenyl sulphonamide

C. N, N- diethyl benzene sulphoamide

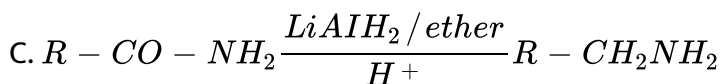
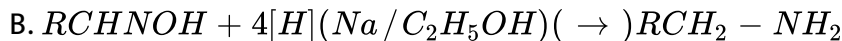
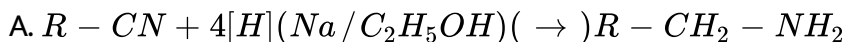
D. N, N- diethyl benzene thionyl amine

Answer: C



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56. Which of the following is Mendius reaction ?





Answer: A



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57. Methyl cyanide on reduction with sodium and alcohol gives

A. Methyl amine

B. Ethyl amine

C. Methyl alcohol

D. Acetic acid

Answer: B



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58. When methyl iodine is heated with ammonia, the product obtained is

- A. Methyl amine
- B. Dimethyl amine
- C. Trimethyl amine
- D. All of these

Answer: D



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59. Reduction of $CH_3CH_2NO_2$ with H_2 and Ni gives

- A. $CH_3CH_2NH_2$
- B. CH_3NH_2
- C. CH_3CH_2OH
- D. CH_3CH_3

Answer: A



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60. Which of the following gives ethyl amine of reduction ?

- A. Acetonitrile
- B. Acetoxime
- C. Nitromethane
- D. Ethylcyanide

Answer: A



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61. Methyl amine is obtained by reduction of nitromethane by using which of the following ?

- A. $\text{Sn} + \text{HCl}$
- B. Na and Hg
- C. Ni and H_2

D. Both (a) and (c)

Answer: D



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62. Alkylation of phthalimide is also known as

A. Wurtz synthesis

B. Sandmeyer synthesis

C. Gaberiel sysntheis

D. Grignard synthesis

Answer: C



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63. What is A in the following reaction ?



A. 

B. 

C. 

D. 

Answer: D



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64. Ethyl iodide reacts with excess ammonia to give

A. Ethyl amine

B. Diethyl amine

C. Triethyl amine

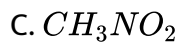
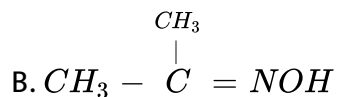
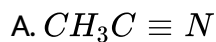
D. Tetraethyl ammonium iodide

Answer: A



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65. Which of the following compound can gives by reduction, ethylamine ?



Answer: A



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66. Methylamine can be prepared by:

- A. Wurtz reaction
- B. Friedel Craft's reaction
- C. Hofmann's bromamide reaction
- D. Clemmensen's reaction

Answer: C



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67. Three moles of ethyl iodide are made to react with 1 mole of ammonia
.The product formed is

- A. Primary amine
- B. Secondary amine
- C. Tertiary amine
- D. Salt

Answer: C

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68. When methyl iodine is heated with ammonia, the product obtained is

- A. Methylamine
- B. Dimethylaniline
- C. Trimethylamine
- D. All the above

Answer: D

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69. By heating alkyl halide with alcoholic ammonia in a sealed tube a mixture of three amines are formed and this reaction is known as

- A. Hofmann's bromide reaction
- B. Hofmann's method

C. Hinsberg method

D. Ammonolysis of alcohol

Answer: B



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70. Na / alcohol is a good

A. Dehydrating agent

B. Oxidising agent

C. Reducing agent

D. Catalyst

Answer: C



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71. Nitro alkanes are reduced to amines by

A. Na / Hg

B. $Na / \text{alcohol}$

C. Sn / Hg

D. $Sn / \text{conc}HCl$

Answer: D



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72. Nitro alkane with Sn / HCl forms Amines. In this reaction

A. $-C \equiv N$ is converted to $-NH_2$

B. $-NO_2$ is converted to $-NH_2$

C. CH_3 is converted to $-NH_2$

D. $R-OH$ is converted to $-NH_2$

Answer: B



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73. When alkylamine are prepared by the action of NH_3 on alkyl halide the excessive use of NH_3

- A. suppresses the formation of other amines
- B. increases the formation of other amines
- C. does not affect the reaction
- D. arrest the reaction

Answer: A



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74. Aldoxime on reduction with $Na + C_2H_5OH$ form

A. 1° amines

B. 2° amines

C. 3° amines

D. alcohols

Answer: A



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75. Ketoxime on reduction gives

A. 1° amines

B. 2° amines

C. 3° amines

D. all of these

Answer: A



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76. n- propyl cyanide on reduction gives

- A. n- butyl amine
- B. n-propyl amine
- C. isobutyl amine
- D. t-butyl amine

Answer: A



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77. Which of the following amides will not undergo Hofmann bromamide reaction ?

- A. Ethanamide
- B. Propanamide
- C. Benzenamide

D. Acetanilide

Answer: D



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78. Gabriel phthalimide reaction is used for the preparation of

A. 1° aromatic amine

B. 1° aliphatic amine

C. 2° aliphatic amine

D. 2° aromatic amine

Answer: B



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79. Order of basicity of amines is

A. ter > sec > pri

B. pri > sec > ter

C. sec > pri > ter

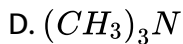
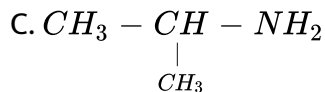
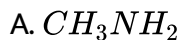
D. ter > pri > sec

Answer: C



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80. Which of the following amine will not react with nitrous acid to give nitrogen



Answer: D



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81. Which of the following will evolve nitrogen with a mixture of $NaNO_2$ and HCl

- A. Primary amines
- B. Secondary amines
- C. Tertiary amines
- D. All of these

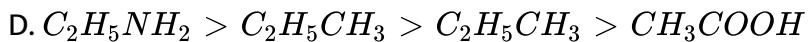
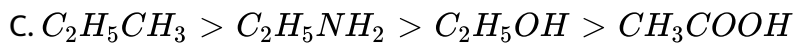
Answer: A



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82. Boiling points of the following order :

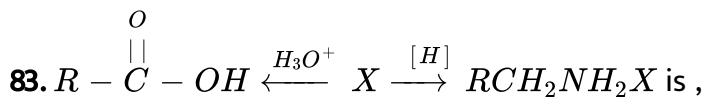
- A. $C_2H_5NH_2 > C_2H_5OH > CH_3COOH > C_2H_5CH_3$
- B. $CH_3COOH > C_2H_5OH > C_2H_5NH_2 > C_2H_5CH_3$



Answer: B



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A. isonitrite

B. nitrile

C. nitrite

D. oxime

Answer: B



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84. The boiling points of amines and their corresponding alcohols and acids vary in the order.

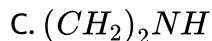
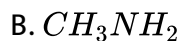
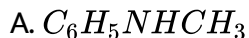


Answer: C



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85. Carbylamine reaction is given by



Answer: B



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86. Aliphatic amines are soluble in water because they_____.

- A. are basic in nature
- B. are acidic compounds
- C. form hydrogen bonds with water
- D. are lighter than water

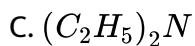
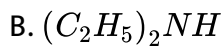
Answer: C



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87. which of the following amines give carbylamine reaction

- A. $C_2H_5NH_2$



Answer: A



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88. Which of the following reactions is given by only primary amines

A. Reaction with HONO

B. Reaction with acetyl chloride

C. Reaction with Grignard reagent

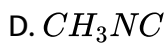
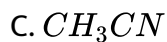
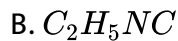
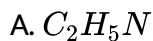
D. Reaction with Grignard reagent

Answer: B



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89. Reaction of ethylamine with chloroform in alcoholic KOH gives



Answer: B



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90. The compound which on reaction with aqueous nitrous acid at low temperature produces an oily nitrosamine, is

A. Ethylamine

B. Methylamine

C. Dimethylamine

D. Triethylamine

Answer: C



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91. How many moles of CH_3I will react with one moles of the ethylamine to form a quarternary salt ?

A. 3

B. 2

C. 4

D. 5

Answer: A



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92. Chloroform is used as a laboratory reagent to lest the presence of

- A. Primary amines
- B. Secondary amines
- C. Tertiary amines
- D. Nitro compounds

Answer: A



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93. Aniline is more stable than anilinium ion because of

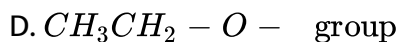
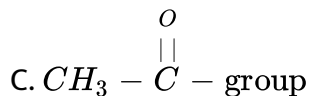
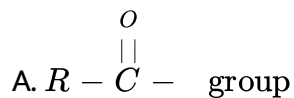
- A. different charges
- B. different π bonds
- C. different resonating structure
- D. different N atoms

Answer: C



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94. Acetylation is the introduction of



Answer: C



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95. Which of the following is absorbed by HCl ?

A. Ethyl alcohol

B. Ethylene

C. Ethylamine

D. Acetylene

Answer: C



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96. Methyl amine is

A. Amphoteric

B. Acidic in nature

C. Neutral in nature

D. Basic in nature

Answer: D



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97. When molecular weight of the amines increase their boiling points will

- A. increase
- B. decreases
- C. remain same
- D. cannot predict

Answer: A



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98. Amines are base because

- A. They can donate lone pair of electron
- B. They can accept lone pair of electron
- C. They have no lone pair of electron
- D. They can accept hydroxyl ion

Answer: A



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99. Trimethyl amine does not react with acetyl chloride because

- A. absence of two hydrogen atoms on nitrogen
- B. presence of hydrogen
- C. absence of replaceable hydrogen on its nitrogen
- D. chemically inert

Answer: C



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100. which of the following reacts with HNO_2 to evolve nitrogen gas

- A. Diethyl amine
- B. Ethyl amine
- C. Dimethyl amine

D. Methyl cyanide

Answer: B



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101. Trimethyl amine is less basic than methyl amine because

- A. it does not react with acid
- B. it is acidic
- C. it has crowding of alkyl groups
- D. it can donate electron pair easily

Answer: C



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102. Ethylamine reacts with of the following to give ethyl ammonium chloride ?

A. HCl

B. PCl_5

C. SOCl_2

D. PCl_3

Answer: A



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103. On acylation, an amine produces only monoacetyl derivative, it must be_____.

A. Primary amine

B. Secondary amine

C. Tertiary amine

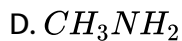
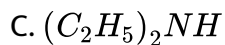
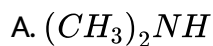
D. Ammonium salts

Answer: B



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104. Which of the following produces diacetyl derivative on reaction with acetic anhydride ?

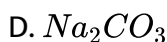
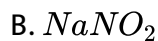
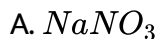


Answer: D



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105. Nitrous acid is produced by reacting HCl with

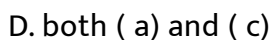
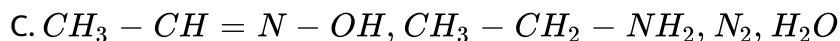
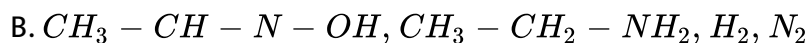
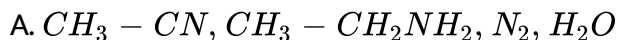


Answer: B



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106. $A \xrightarrow{\text{Na} + \text{alcohol}} B \xrightarrow{HNO_2} C_2H_5 - OH + C + D$ Here A, B, C, D are respectively

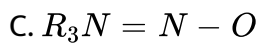
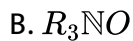


Answer: D



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107. R_3N reacts with HNO_2 to give

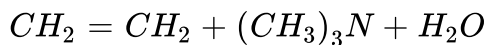
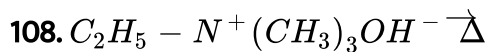


D. visibly no change

Answer: D



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Above reaction is known as

- A. Hoffmann's degradation reaction
- B. Hoffmann's carbylamine test
- C. Hoffmann's elimination reaction
- D. Hinsberg's test

Answer: C

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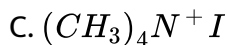
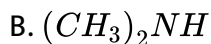
109. Diethyl amine reacts with sulphuric acid to give

- A. $[(C_2H_5)_2NH_2]^+ - (2)SO_4^{--}$
- B. $[(C_2H_5)_2NH_2^+ SO_4^{--}]$
- C. $[(C_2H_5)_2NH_3]^+ SO_4^{--}$
- D. $(C_2H_5NH_3^+)_2 SO_4^{--}$

Answer: A

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110. Methylation of methyl amine gives



D. All of these

Answer: D



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111. Crowding effect of alkyl group reduces basic character of

A. Primary amine

B. Secondary amine

C. Tertiary amine

D. Ammonia

Answer: C



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112. Amines are basic in nature . They form salt with

A. $NaOH$

B. NH_3

C. HCl

D. NH_4OH

Answer: C



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113. which of the following reaction of amines can be used to distinguish between 1^0 , 2^0 , 3^0 amine ?

- A. Oxidation
- B. Hydroxylation
- C. Nitration
- D. Acetylation

Answer: D



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114. Which of the following is the weakest base ?

- A. Triethylamine
- B. Diethylamine
- C. Ethylamine
- D. Ammonia

Answer: D



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115. Primary amines are identified by:

- A. Hofmann's reaction
- B. Carbylamine reaction
- C. Friedel- Craft's reaction
- D. Biuret reaction

Answer: B



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116. Amines are more basic than

- A. Alcohols

B. NaOH

C. LiOH

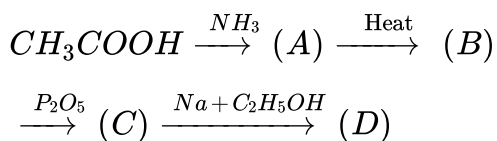
D. KOH

Answer: A



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117. The product (D) in the following sequence of reaction is



A. Ester

B. Amine

C. Acid

D. Alcohol

Answer: B

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118. A solution of ethylamine _____.

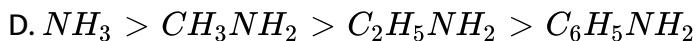
- A. turns blue litmus red
- B. turns red litmus blue
- C. does not affect the litmus
- D. beaches the litmus

Answer: B

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119. The decreasing order of basic characters of the three amines and ammonia is





Answer: C



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120. Which of the following is not correct ?

A. Ethyl amine and aniline both have $-NH_2$ group

B. Ethyl amine and aniline dissolve in HCl

C. Ethyl amine and aniline both react with $CHCl_3$ and KOH to form unpleasant smelling compound

D. Ethyl amine and aniline both react with HNO_2 to give hydroxyl compound.

Answer: D



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121. $(CH_3)_3N + CH_3COCl$ gives

- A. Monoacetyl derivative
- B. Diacetyl derivative
- C. Both (a) and (b)
- D. Do not react

Answer: D



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122. Aqueous solution of amines contain mainly

- A. Dissociated molecule Hydrated molecule
- B. Hydrated molecule
- C. Oxidised molecule

D. Undissociated molecule

Answer: D



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123. Acetylation can be brought about by

A. CH_3COOH

B. $(CH_3CO)_2O$

C. CH_3COCl

D. both (b) and (c)

Answer: D



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124. Secondary amines on acetylation give

A. Monoacetyl derivative

B. Diacetyl derivative

C. Do not react

D. Triacetyl derivative

Answer: A



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125. Nitroso compound are

A. Yellow

B. Blue

C. Red

D. Orange

Answer: A



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126. Tertiary amines with nitrous acid form

- A. alcohol
- B. acids
- C. nitroso compounds
- D. Do not react

Answer: D



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127. Amines with excess of alkyl halide form quaternary salts. This is an example of _____.

- A. Oxidation
- B. Reduction
- C. Alkylation

D. Exhaustive alkylation

Answer: D



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128. Isocyanide has the functional group

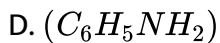
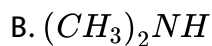
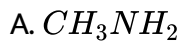


Answer: C



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129. Which of the following will have lowest value of pK_b ?

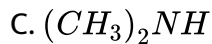
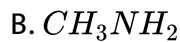


Answer: B



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130. Which of the following is a strongest base ?



Answer: C



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131. 1° , 2° , 3° amines can be distinguished by Hinsberg's reagent. Hinsberg's reagent is

- A. Acetic anhydride
- B. Acetyl chloride
- C. Nitrous acid
- D. Benzene sulphonyl chloride

Answer: D



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132. The basic character of amines can be explained

- A. in terms of Lewis and Arrhenius
- B. only in terms of Lowry Bronsted
- C. in terms of Lewis and Lowry Bronsted

D. only Lewis concept

Answer: C



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133. Compounds containing both $-NH_2$ and $COOH$ groups are called

A. amino acids

B. α - hydroxy acids

C. acid amines

D. dicarboxylic acid

Answer: A



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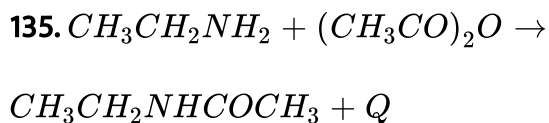
134. Ethyl amine reacts with excess of methyl iodide to give

- A. ethyl methyl amine
- B. ethyl diethyl amine
- C. ethyl trimethyl ammonium iodide
- D. All of these

Answer: D



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The compound Q is

- A. Acetylchloride
- B. Acetone
- C. Ethanoic acid
- D. Acetonitrile

Answer: C



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136. Amines are the bases but

A. Monoacidic

B. Diacidic

C. Triacidic

D. Tetraacidic

Answer: A



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137. Bromination of aniline can only give ortho para substitution because

A. $-NH_2$ group is powerful activating group

B. $-NH_2$ is less powerful

C. Benzene ring is active

D. Benzene ring is less active

Answer: A



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138. Which of the following is Zwitter ion ?

A. 

B. 

C. 

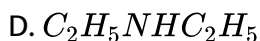
D. 

Answer: B



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139. An optical inactive amine (A) $C_4H_{11}N$ on treatment with HNO_2 give an alcohol (B) , The Compound (B) on heating with conc. H_2SO_4 at 453 K give an alkene (C) . The C on treatment with HBr give an optical active compound (D) having molecular formula C_4H_9Br . Identify (A)

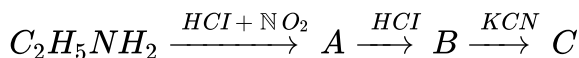


Answer: B



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140. In the reaction :



The final product C is :

A. Propan nitrile

B. ethane nitrile

C. propyl amine

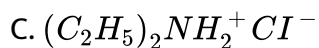
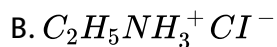
D. formo nitrile

Answer: A



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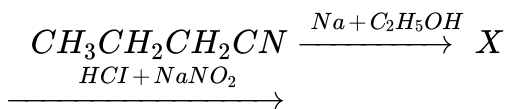
141. Which of the following species is formed when ethanamines is reacted with conc. HCl ?



Answer: B

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142. Identify the product Y in the series



A. propan -1-ol

B. propan -2-ol

C. butan-1-ol

D. butan-2-ol

Answer: C

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143. The best methylation agent is

A. CH_3Cl

B. CH_3Br

C. CH_3F

D. CH_3I

Answer: D



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144. Primary amine with excess acetyl chloride forms

A. diacetyl dervative

B. triacetyl derivative

C. monoacetyl derivative

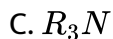
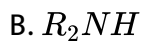
D. all of these

Answer: A



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145. The amine which forms co-ordinate bond with $BeCl_2$ is / are



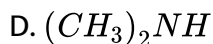
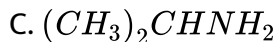
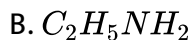
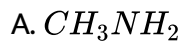
D. all of these

Answer: D



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146. which of the following amine will not give effervescence with HNO_2



Answer: D



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147. Tars' are produced due to oxidation while _____ of aniline

- A. Bromination
- B. Sulphonation
- C. Nitration
- D. Hydrolysis

Answer: C



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148. $(CH_3)_2CHNH_2$ is reacted with acetic anhydride the compound formed is

- A. $(CH_3)_2CHNCOCH_3$
- B. $(CH_3)_2CHN(COCH_3)_2$
- C. $(CH_3)_2CHOH$
- D. $(CH_3)_2CN(COOCH_3)_2$

Answer: B



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149. The maximum number of moles of an acetylating agent consumed by mole of each of 1^0 , 2^0 and 3^0 amines are respectively

- A. 2, 3&4
- B. 1, 2&3
- C. 2, 1&0
- D. 0, 2&1

Answer: C



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150. The conversion of 1^0 amine to 3^0 amine. The process involved may be called

- A. reduction
- B. alkylation
- C. oxidation
- D. hydrogenation

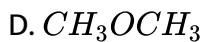
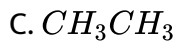
Answer: B



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151. Which of the the following has highest boiling point ?

- A. CH_3NH_2
- B. CH_3OH



Answer: B



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152. Acetoxime on reduction and followed by acetylation gives

A. ethyl amine

B. isopropyl amine

C. monoacetyl isopropyl amine

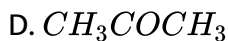
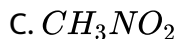
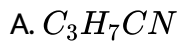
D. diacetyl isopropyl amine

Answer: D



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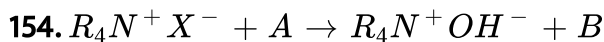
153. The reduction of which of the following gives propan -1- amine ?



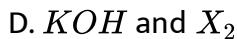
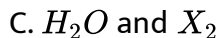
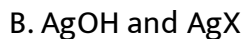
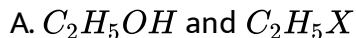
Answer: B



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then A and B are :

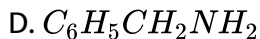
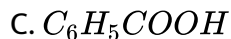
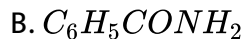
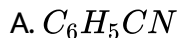
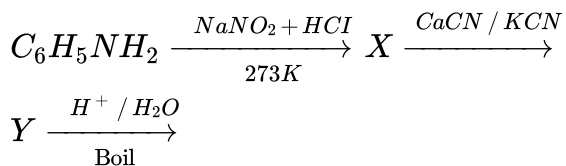


Answer: B



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155. Identify 'Z' in the sequence



Answer: C



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A. 

B. 

C. 

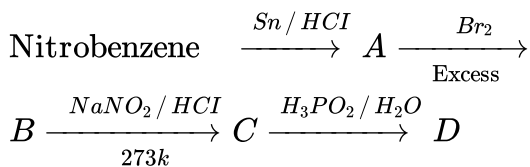
D. 

Answer: C



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157. Identify A ,B ,C and D and the following reactions :



A. A = aniline , B = 2,4,6- tribromoniline

C= 2,4,6 - tribromo benzene diazonium chloride

D= 1,3,5- tribromo benzene

B. A= benzene B = 2,4,6- tribromo benzene

C= 2,4,6- trichloro benzene

D= 2,4,6- trichloro phenol

C. A= aniline B= P- bromoaniline

C= P- bromobenzene diazonium chloride

D= p- bromo phenol

D. A = aniline B= p- bromo aniline

C= p- bromobenzene diazonium chloride

D= bromo benzene

Answer: A



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158. Predict the product



A. 

B. 

C. 

D. 

Answer: D



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159. Suggest a structural formula of a compound having molecular $C_6H_{11}N(A)$ which is optically active dissolves in dil aqueous HCl and releases N_2 with nitrous acid

A. 

B. 

C. 

D. 

Answer: D



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160. An organic compound (A) on reduction gives compound (B) on treatment with $CHCl_3$ and alcoholic KOH gives (C) on catalytic reduction gives N- Methyl aniline .The compound (A) is

A. Methylamine

B. Aniline

C. Nitrobenzene

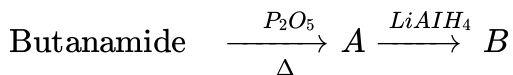
D. Nitro methane

Answer: C



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161. What is the end product (B) in the following reaction sequence ?



- A. n- butylamine
- B. n- propylcyanide
- C. propyl isocyanide
- D. n-propylamine

Answer: A



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162. Hinsberg's reagent is

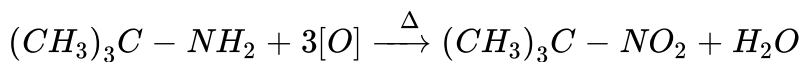
- A. Benzene sulphonyl chloride
- B. Benzene sulphonic acid
- C. Phenyl isocynide
- D. Benzene sulphonamide

Answer: A



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163. In the following reaction what is A ?



A. KOH

B. KNO_2

C. $KMnO_2$

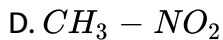
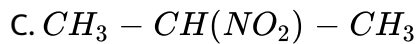
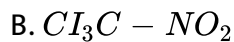
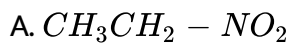
D. KNO_2

Answer: C



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164. Which of the following do not exhibit tautomerism ?



Answer: B



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165. Condensation of secondary nitroalkane with aldehyde proceeds via ____ ion



Answer: B

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166. The isomerism exhibited by primary and secondary nitroalkane to show aci-form is

- A. position isomerism
- B. geometrical isomerism
- C. chain isomerism
- D. tautomerism

Answer: D

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167. Which statement is not true among the following

- A. Amines are bases
- B. They turn red litmus blue

C. Trimethyl amine is less basic than diemethyl amine

D. Amines yield alcohols on aqueous hydrolysis

Answer: D



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168. n- propyl amine and isopropyl amines are

A. Functional isomers

B. Position isomers

C. Chain isomers

D. Optical isomers

Answer: B



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169. 3^0 amines contains

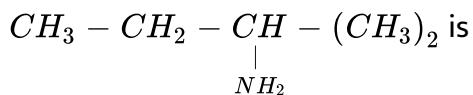
- A. nitrile group
- B. imino group
- C. nitro group
- D. amino group

Answer: A



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170. The IUPAC name of the given compound



- A. 2- Methyl -3- amino butane
- B. 2-Methyl - pentan -3-amine
- C. 1,1- dimethyl - pentan -3-amine

D. N,N-dimethyl -butan-2- amine

Answer: B



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171. The IUPAC name for $(CH_3)_2NC(CH_3)_3$

A. N, N dimethyl 2- Methyl - propan -1- amine

B. N,N dimethyl 2- methyl - propan -2- amine

C. Dimethyl t-butyl amine

D. N ,N- dimethyl butan -2- amine

Answer: B



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172. Acetone oxime on catalytic hydrogenation gives

- A. Propanamine
- B. isopropyl amine
- C. ethylmethyl amine
- D. ethane amine and CH_4

Answer: B



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173. Hoffmann bromanide degradation is

- A. Condensation reaction
- B. Addition reaction
- C. Molecular rearrangement reaction
- D. Coupling reaction

Answer: C



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174. Nitriles are catalytically reduced to amines .This is

- A. Hofmann's reaction
- B. Wurtz reaction
- C. Mendius reaction
- D. Williamson's reaction

Answer: C



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175. Which of the following compound give a secondary amine on reduction ?

- A. nitromethane
- B. oxime
- C. methyl cyanide

D. methyl isocyanide

Answer: D



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176. The order of boiling point in isomers amine is

A. $1^0 > 2^0 > 3^0$

B. $1^0 < 2^0 > 3^0$

C. $1^0 < 2^0 < 3^0$

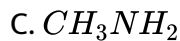
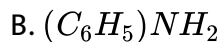
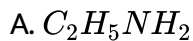
D. $1^0 > 2^0 3^0$

Answer: A



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177. Carbylamine reaction is NOT given by

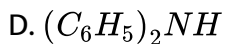
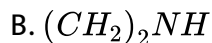
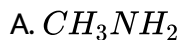


Answer: D



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178. Which of the following amines gives a characteristic offensive odour of isocyanide when heated with chloroform and caustic potash ?



Answer: A

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179. If 'A' is $C_2H_5NH_2$, 'B' is $(C_2H_5)_2NH$, 'C' is $(C_2H_5)_3N$ then order of solubility in water is

A. $A > B > C$

B. $B < A < C$

C. $C < B < A$

D. $C > B < A$

Answer: C

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180. Aniline is resonance hybrid of ___ structures

A. 1

B. 3

C. 5

D. 7

Answer: C



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181. Diethyl amine is more basic than

A. Ethyl amine

B. Triethyl amine

C. Ammonia

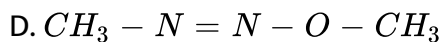
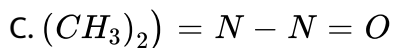
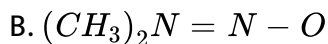
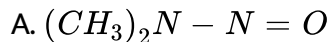
D. All of these

Answer: D



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182. Dimethyl amine reacts with nitrous acid to give which of the following

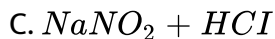
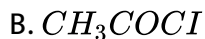


Answer: A



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183. A colourless odourless and non combustible gas is liberated when ethylamine reacts with



D. H_2SO_4

Answer: C



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184. The end product of the reaction

Ethylamine $\xrightarrow{HNO_2} A \xrightarrow{PCl_5} B \xrightarrow{NH_3} C$ is

- A. Ethyl amide
- B. Ethyl amine
- C. Methyl amine
- D. Acetamide

Answer: B



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185. An organic compound A having molecular formula C_2H_3N on reduction gave a compound B. Upon treatment with $HONO$, B gave ethyl alcohol and on warming with $CHCl_3$ and alcoholic KOH, it gave offensive smell. The compound A is

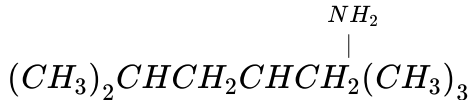
- A. acetamide
- B. methyl cyanide
- C. ethyl amine
- D. ethyl cyanide

Answer: B

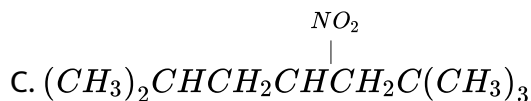
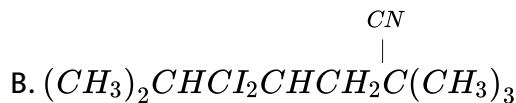
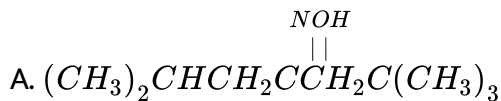


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186. compounds X is treated with NH_2OH and followed by reduction gives :



The compound X is



Answer: D



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187. Amines form salt with H_2SO_4 the molar ration of

A. 2 : 2

B. 2 : 1

C. 1 : 2

D. 2:3

Answer: B



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188. A water insoluble N- containing organic compound that dissolves in cold dilute HCl is likely to be a / n

A. Nitro compound

B. Amine

C. Amide

D. Nitrile

Answer: B



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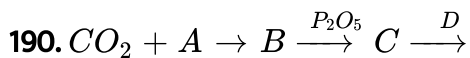
189. The isomer of $C_5H_{13}N$ 'A' on reaction with nitrous acid gives 2-Methyl-2-butanol the isomer 'B' on reaction with acetyl chloride gives N-ethyl-N-isopropyl acetamide Whereas isomer 'C' have no reaction with acetic anhydride which of the following are A, B and C ?

- A. 2-methyl-2-butanamine N-ethyl-2-propanamine N-ethyl-N-methylethanamine
- B. 2-Methyl-1-butanamine N-ethyl-2-propanamine and N,N-dimethylethanamine
- C. 2-methyl-1-butanamine N-ethyl-2-propanamine and N,N-dimethylethanamine
- D. 2-Methyl-2-butanamine N-methyl-2-butanamine and N-ethyl-N-methylethanamine

Answer: A



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Which of the following are A and D in the above series of reaction ?

- A. C_2H_5MgX and $(CH_3)_2NC_2H_5$
- B. C_2H_5MgX and $(C_2H_5)_2NCH_3$
- C. C_2H_5MgX and N – methyl -2- butanamine
- D. CH_3MgX and 'N- ethyl -2- butanamine

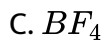
Answer: D



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191. To replace $-N_2^+Cl$ group by -F group, benzene diazonium chloride is treated with

- A. HF
- B. KF

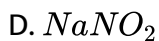


Answer: D



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192. The catalyst used in Gattermann reaction is



Answer: B



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193. In azo-coupling the substitution usually occurs at ____ position to the activating group

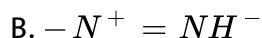
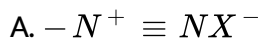
- A. ortho
- B. meta
- C. para
- D. ortho and meta

Answer: C



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194. the azo compounds are coloured as they absorb the visible region of electromagnetic spectrum because of presence of



C. conjugate system through $N=N$ bond

D. $-N \equiv N$

Answer: C



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195. Choose the proper option for given statement on the basis of physical properties

- A. Alkyl isocyanides have bad odours while alkylcyanides have pleasant odours
- B. Alkyl cyanides are poisonous compounds
- C. the boiling points of alkyl cyanides are lower than their isomeric alkyl - isocynides
- D. A cetoneitrile is soluble in water but methyl carbylamine is not

Answer: D



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196. Ethyl isocyanide on hydrolysis in acidic medium generates:

- A. propanoic acid and ammonium salt
- B. ethanoic acid and ammonium salt
- C. methyl amine salt and ethanoic acid
- D. ethylamine salt and methanoic acid

Answer: D



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197. What is the conjugate base of OH^- ?

- A. O_2
- B. H_2O
- C. O^-
- D. O^{2-}

Answer: D



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198. Reaction of cyclohexanone with dimethylamine in the presence of catalytic amount of an acid forms a compound if water during the reaction is continuously removed. The compound formed is generally known as

- A. a Schiff's base
- B. an enamine
- C. an imine
- D. an amine

Answer: B



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199. 

The alkane formed as a major product in the above elimination reaction is

A. 

B. $CH_2 = CH_2$

C. 

D. 

Answer: B



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200. Trichloroacetaldehyde was subjected to Cannizzaro's reaction by using NaOH . The mixture of the products contains sodium trichloroacetate and another compound the other compound is

A. Trichloromethanol

B. 2, 2, 2- Trichloropropanol

C. Chloroform

D. 2,2,2- Trichloroethanol

Answer: D



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201. Acetamide is treated separately with the following reagents. Which one of these would give methyl amine ?

A. PCl_5

B. $NaOH + Br_2$

C. Sodalime

D. Hot conc. H_2SO_4

Answer: B



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

- A. toluene
- B. benzene
- C. benzoic
- D. nitrobenzene

Answer: A



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203. If two compounds have the same empirical formula but different molecular formulae they must have

- A. different percentage composition
- B. different molecular weight
- C. same viscosity

D. same vapour density

Answer: B



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204. The formation of cyanohydrin from ketone is an example of :

- A. electrophilic addition
- B. nucleophilic addition
- C. nucleophilic substitution
- D. electrophilic substitution

Answer: B



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205. Butanenitrile may be prepared by heating

- A. propyl alcohol with KCN
- B. butyl alcohol with KCN
- C. butyl chloride with KCN
- D. propyl chloride with KCN

Answer: D



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206. In the following compounds :



The order of basicity is

- A. $IV > I > III > II$
- B. $III > I > IV > II$
- C. $II > I > III > IV$
- D. $I > III > II > IV$

Answer: D



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207. Among the following statements on the nitration of aromatic compounds the false one is

- A. the rate of nitration of benzene is almost the same as that of hexadeutero benzene
- B. the rate of nitration of toluene is greater than that of benzene
- C. the rate of nitration of benzene is greater than that of hexadeutero benzene
- D. nitration is an electrophilic substitution reaction

Answer: C



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208. The most unlikely representation of resonance structures of p-nitrophenoxide ion is

A. 

B. 

C. 

D. 

Answer: C



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209. The correct order of basicities of the following compounds is



A. $2 > 1 > 3 > 4$

B. $1 > 3 > 2 > 4$

C. $3 > 1 > 2 > 4$

D. $1 > 2 > 3 > 4$

Answer: B

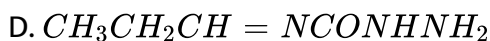
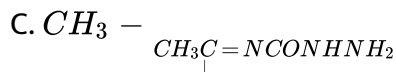
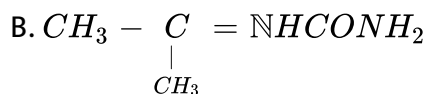
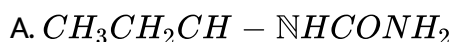


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210. Compounds A (molecular formula C_3H_8O) is treated with acidified potassium dichromate to form a product B (molecular formula C_3H_6O)

B. Forms a shining silver mirror on warming with ammoniacal silver nitrate

B when treated with aqueous solution of $H_2NCONHNH_2HCl$ and sodium acetate gives a product C. Identify the structure of C.



Answer: A



211. Benzamide on reaction with $POCl_3$ gives

- A. Aniline
- B. Chlorobenzene
- C. Benzyl amine
- D. Benzonitrile

Answer: D



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212. In the compound given below the correct order of the acidity of the H-present on position X,Y and Z is



- A. $Z > X > Y$

B. $X > Y > Z$

C. $X > Z > Y$

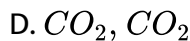
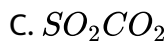
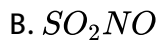
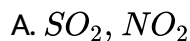
D. $Y > X > Z$

Answer: C



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213. When benzene sulfonic acid and p-nitrophenol are treated with $NaHCO_3$, the gases released respectively are

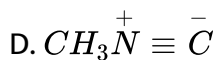
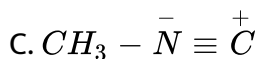
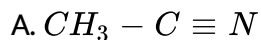


Answer: D



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214. $CH_3NH_2 + CHCl_3 + KOH \rightarrow$ nitrogen containing compound
+ $KCl + H_2O$. Nitrogen containing compound is



Answer: D



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215. In the following reaction



The structure of the major product X is



B. 

C. 

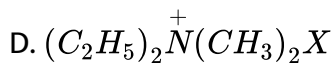
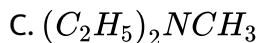
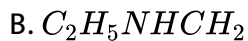
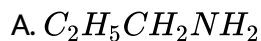
D. 

Answer: B



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216. The following amien produces an oily yellow colured nitroso amine



Answer: B



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217. The name of the reaction to convert alkane nitrile to primary aliphatic amine is

- A. Carbyl amine reaction
- B. Clemensen's reaction
- C. Hofmann's reaction
- D. Mendius reaction

Answer: D



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218. IUPAC name of $C_2H_5 - \overset{\overset{CH_3}{|}}{CH} - NH_2$ is

- A. ethyl methyl amine
- B. butane amine
- C. methyl ethyl amine

D. 2- butanamine

Answer: D



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219. the complete methylation of methyl ethanamine gives

- A. diethyl dimethyl ammoniumion
- B. ethyl trimethyl ammonium halide
- C. ethyl trimethyl amine
- D. dimethyl ethanamine

Answer: B



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220. The characteristic function group present in secondary amine is

A. amino

B. nitrile

C. imino

D. nitro

Answer: C



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221. Alkyl cyanide (acetonitrile) on reduction produce

A. 1° amine

B. 3° amine

C. 2° amine

D. quaternary salt

Answer: A



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222. Acetaldoxime on reduction by Na and alcohol produces

- A. propan -2- ol
- B. acetaldehyde
- C. ethanol
- D. ethyl amine

Answer: D



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223. IUPAC name of $\text{CH}_3\text{CH}(\text{NH}_2) - \text{CH}_3$

- A. dimethyl amine
- B. isopropylamine
- C. aminopropane

D. 2-propanamine

Answer: D



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224. The following compound on reaction with HNO_2 gives an alcohol

A. RNH_2

B. $R - CONH_2$

C. R_2NH

D. R_3N

Answer: A



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225. Primary amine (RNH_2) reacts with nitrous acid to give

A. aldehyde

B. ROR

C. ROH

D. $RNH_3^+ NO_2^-$

Answer: C



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226. n- propylamine reacts with NHO_2 to give

A. n-propyl nitros amine

B. iso-propyl alcohol

C. n- propyl alcohol

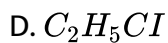
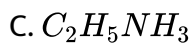
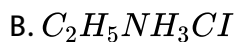
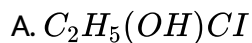
D. no reaction

Answer: C



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227. When ethyl amine reacts with HCl the product formed is



Answer: B



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228. In acetylation of amines one or more hydrogen atoms are removed from

A. carbon atoms

B. acetyl chloride only

C. nitrogen atom only

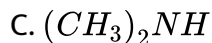
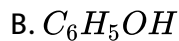
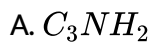
D. both (a) and (c)

Answer: C



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229. Which of the following cannot be acetylated



Answer: D



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230. During acetylation of amines, what is replaced by acetyl groups?

A. one H- atom

B. one or more H atoms

C. one or more H atoms from N- atom or C- atom

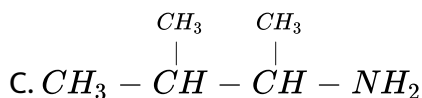
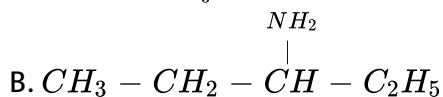
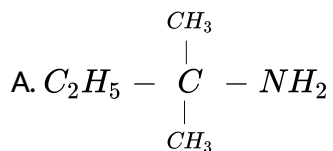
D. one or more H atoms from N- atom only

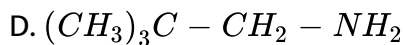
Answer: D



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231. An isomer of $C_5H_{13}N(A)$ on action of HNO_2 gives B. The compound B has no reaction with sodium metal. It reacts with $SOCl_2$ to form C. The compound C on Wurtz synthesis gives 3, 3, 4, 4- tetramethyl hexane. Which of the following is A ?



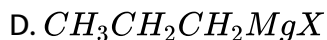
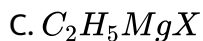
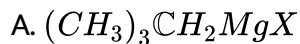


Answer: A



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232. Propane nitrile reacts with A to give B . The compound B on addition of HCN gives C .The compound C on reduction give 1- Amino -2- ethyl -4- methyl -2- pentanol which of the follow is A gt

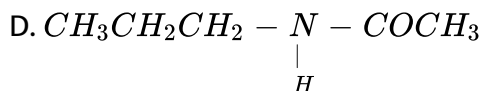
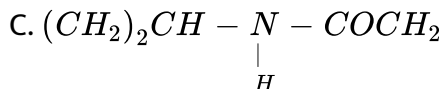
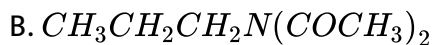
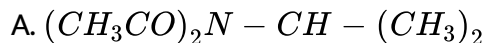


Answer: B



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233. Isopropylamine with excess of acetic anhydride will give

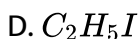
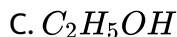
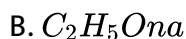
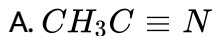


Answer: A



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234. A compound D on hydrolysis formed acetamide which further hydrolysed to give acetic acid and NH_3 . The compound D is



Answer: A



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235. Acetoxime on reduction gives a product which an acetylation gives

- A. diacetyl ethyl amine
- B. diacetyl isopropyl amine
- C. diacetyl n- propyl amine
- D. acetyl di- isopropy amine

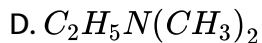
Answer: B



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236. Ethanamine with excess of acetyl chloride gives





Answer: C



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237. The IUPAC name of ethyl methyl amine is

A. methyl ethanamine

B. 2- amino propane

C. ethyl methanamine

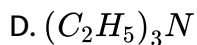
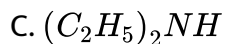
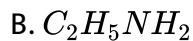
D. propanamine

Answer: A



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238. Strongest base in aqueous phase is



Answer: C



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239. Aniline treated with nitrous acid followed by hydrolysis gives

A. Cumene

B. Phenyl cyanide

C. Phenyl isocyanide

D. Carbolic acid

Answer: D



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240. $C_2H_5NH_2$ formed by reduction of

A. Methyl cyanide

B. Ethyl cyanide

C. Acetone

D. Acetic acid

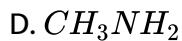
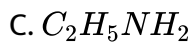
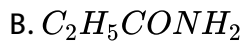
Answer: A



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241. $C_2H_5NH_2 \xrightarrow{HNO_2} A \xrightarrow{PCl_5} B \xrightarrow{NH_3} C$ is

A. C_2H_5OH



Answer: C



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242. Which give yellow oily liquid with nitrous acid ?

A. Ethyl amine

B. Diethyl amine

C. Trimethyl amine

D. Methyl amine

Answer: B



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243. Isopropyl amine is

- A. Primary amine
- B. Secondary amine
- C. Tertiary amine
- D. Quaternary ammonium salt

Answer: A



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244. Which on reaction with nitrous acid gives yellow oily liquid ?

- A. Ethyl amine
- B. Ethyl methyl amine
- C. Ethyl dimethyl amine
- D. Ethyl trimethyl amine

Answer: B



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245. N- ethyl N- methyl propan -1- amine is ____ amine

- A. Primary amine
- B. Secondary amine
- C. Tertiary amine
- D. Quaternary

Answer: C



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246. One mole of $C_2H_5NH_2$ react with HNO_2 how many gram of nitrogen is produced

A. 28 gm

B. 30 gm

C. 25 gm

D. 42 gm

Answer: A



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247. Red coloured nitroso- nitroalkane is formed by the action of following on primary nitroalkane

A. First HNO_2 then $NaOH$

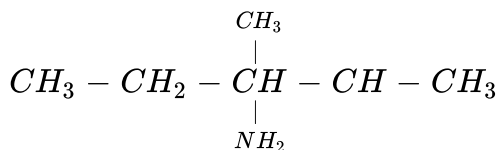
B. First $NaOH$ then HNO_2

C. Only HNO_2

D. Only $NaOH$

Answer: A

248. The IUPAC name of the given compound is



- A. 4-methyl-3-aminopentane
- B. 2-methyl-pentan-3-amine
- C. 2-(N,N-dimethyl amino) butane
- D. 2,4-dimethyl benzenamine

Answer: B

249. The action of nitrous acid on an aliphatic primary amine gives

- A. Alcohol

B. Alkyl nitrile

C. Secondary amine

D. Nitroalkane

Answer: A



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250. Acetoxime when reduced by sodium and alcohol give

A. n- propyl amine

B. Isopropyl amine

C. Dimethyl - propan -1- amine

D. Ethyl amine

Answer: B



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251. IUPAC name of $(C_2H_5)_2NCH(CH_3)_2$ is

- A. Dimethyl butananmine
- B. N,N- diethyl - propan -2- amine
- C. Diethyl - propan -1- amine
- D. Diethyl-1- propan -2- amine

Answer: B



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252. How many primary amines are possible for the formula $C_4H_{11}N$

- A. 1
- B. 2
- C. 3
- D. 4

Answer: D



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253. How many moles of methyl iodide would be required to form quaternary ammonium salt when treated with a secondary amine ?

A. 1

B. 2

C. 3

D. 4

Answer: B



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254. The amine 'A' when treated with nitrous acid gives yellow oily substance. The amine A is

- A. Triethylamine
- B. Trimethylamine
- C. Aniline
- D. Methylphenylamine

Answer: D



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255. Select the compound which on treatment with nitrous acid liberates nitrogen.

- A. Nitroethane
- B. Triethylamine
- C. Diethylamine
- D. Ethylamine

Answer: D



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256. Which of the following aminoacids is basic in nature?

- A. Valine
- B. Tyrosine
- C. Arginine
- D. Leucine

Answer: C



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257. Primary nitroalkanes are obtained in good yield by oxidising aldoximes with the help of

- A. trifluoroperoxyacetic acid
- B. acidified potassium permanganate

C. concentrated nitric acid

D. potassium dichromate and dilute sulphuric acid

Answer: A



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258. In case of substituted aniline the group which decreases the basic strength is

A. $-OCH_3$

B. $-CH_3$

C. $-NH_3$

D. $-C_6H_5$

Answer: D



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259. Which of the following statement(s) is/are incorrect in case of Hofmann bromamide degradation ?

- A. Reaction is useful for decreasing length of carbon atom
- B. it gives tertiary amine
- C. It gives primary amine
- D. Aqueous or alcoholic KOH is used with bromine

Answer: B



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260. The amine which reacts with p- toluenesulphonyl chloride to give a clear solution which on acidification gives insoluble compound is

- A. $C_2H_5NH_2$
- B. $(C_2H_5)_2NH$
- C. $(C_2H_5)_3N$

D. $CH_3NHC_2H_5$

Answer: A



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261. The amino acid which is basic in nature is

A. Histidine

B. Tyrosine

C. Proline

D. Valine

Answer: A



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262. The conversion of primary aromatic amines into diazonium salts is known as

- A. esterification of nitrogen
- B. combination of nitrogen and halogen
- C. diazotisation
- D. dinitration

Answer: C



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263. Which of the following diazonium salt group ?

- A. $-N_2^- X^+$
- B. $-N_2^- X$
- C. $-N^+ \equiv N HSO_4^-$
- D. $-N^+ = NCl^-$

Answer: C



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264. Diazonium salts are stable at _____ temperature .

A. 5 K

B. 10 K

C. 278 K

D. 25 K

Answer: C



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265. Which of the following is used in preparation of benzene diazonium salt from aniline ?

- A. Sodium nitrate
- B. Nitrous acid
- C. Sodium chloride
- D. Nitric acid

Answer: B



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266. The stability of arenediazonium ion is due to resonating structures.

- A. 1
- B. 3
- C. 5
- D. 7

Answer: C



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267. The colour of benzene diazonium chloride is

- A. orange
- B. yellow
- C. colourless
- D. blue

Answer: C



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268. Removal of $-N_2^+$ X group by $-Cl$, $-Br$, $-CN$ group in presence of $CuCl$ and respective acid is called as

- A. Sandmeyer reaction
- B. Gatterman reaction
- C. Balz- Schieman reaction

D. Nef reaction

Answer: A



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269. p- Hydroxyazobene is _____ colour dye

A. Orange

B. Yellow

C. White

D. Blue

Answer: A



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270. Introduction of fluoride group in benzene ring is more easy by

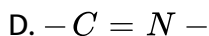
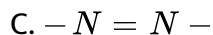
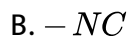
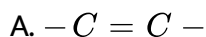
- A. electrophilic substitution
- B. replacement of diazonium group
- C. nucleophilic substitution
- D. coupling reaction

Answer: B



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271. The azo compounds have an extended conjugated system having both aromatic rings are joined through the



Answer: C

272. Which of the following is yellow dye ?

- A. o- amino azobenzene
- B. p- Hydrozyazobenzene
- C. Benzene diazonium chloride
- D. p- amino azobenzene

Answer: D

273. When benzenediazonium chloride react with substance of column I it gives coloured product given in column II.

Select proper option from the following .



A. A-1, B-2, C-3, D-4

B. A-2, B-1, C-3, D-4

C. A-3, B-4, C-1, D-2

D. A-4, B-2, C-1, D-3

Answer: C



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274. Which of the following diazonium salt when boiled with dil H_2SO_4 gives the corresponding phenol most difficult ?

A. 

B. 

C. 

D. 

Answer: A

275. Aniline when diazotized in cold and then treated with aniline gives coloured product its structure would be

A. 

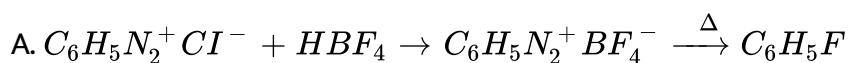
B. 

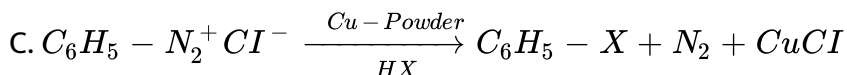
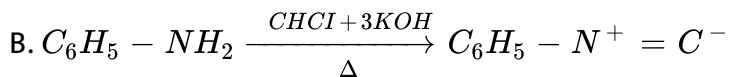
C. 

D. 

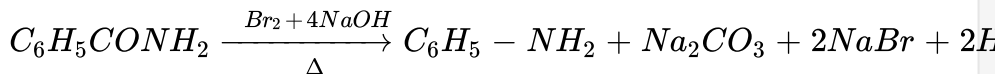
Answer: B

276. Which of the following reaction is known as "Balz-Schiemann reaction" ?





D.



Answer: A



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277. Which is most versatile compound in the synthesis of aromatic compound ?

A. Benzen diazonium chloride

B. Nitro benzene

C. $C_6H_5CONH_2$

D. C_6H_5Cl

Answer: A

Test Your Grasp

1. IUPAC name of ethyl amine is

- A. Ethanamine
- B. Amino ethane
- C. Ethylamine
- D. Both (a) and (b)

Answer: D

2. Acetaldoxime on reduction by Na and alcohol produces

- A. Methyl amine

B. Ethyl amine

C. Propyl amine

D. Iso- propyl amine

Answer: B



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3. $(CH_3)_3N$ is

A. Primary amine

B. Secondary amine

C. Tertiary amine

D. Quarternary salt

Answer: C



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4. Ethyl amine reacts with which of the following to give ethyl ammonium chloride ?

A. HCl

B. PCl_5

C. SOCl_2

D. PCl_3

Answer: A



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5. Trimethyl amine is less basic than methyl amine because

A. it does not react with acid

B. it is acidic

C. it has crowding of alkyl groups

D. N has lone pair of e^-

Answer: C



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6. n-butyl amine and isobutyl amine are

- A. Stereo isomers
- B. Chain isomers
- C. Position isomers
- D. Functional isomers

Answer: B



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7. The true statement about ethylamine is

- A. it is weaker base than ammonia

- B. it is stronger base than triethyl amine
- C. it is stronger base than triethyl amine
- D. It is stronger base than alkali

Answer: C



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8. The reaction which is given only by primary amines is

- A. acetylation
- B. alkylation
- C. reaction with HNO_2
- D. carbyl amine test

Answer: D



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9. A amine produces yellow oily compound on reaction with nitrous acid .

It is probably a

- A. Primary amine
- B. Secondary amine
- C. Tertiary amine
- D. Quarternary salt

Answer: B



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10. Which of the following produces diacetyl derivative on reaction with acetic anhydride ?

- A. $(CH_3)_2NH$
- B. $(CH_3)_3N$
- C. $(C_2H_5)_2NH$

D. CH_3NH_2

Answer: D



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11. According to Lewis concept $R - NH_2$

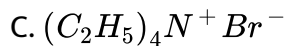
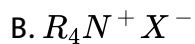
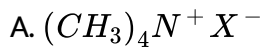
- A. donated proton
- B. donates pair of electrons
- C. accepts pair of electrons
- D. accepts proton

Answer: B



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12. Which of the following is quarternary ammonium salt ?



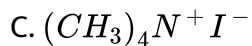
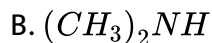
D. both (c) and (b)

Answer: B



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13. Methylation of methyl amine gives 1st product as



D. both (a) and (b)

Answer: D



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14. Which of the following is absorbed by dilute HCl ?

- A. Ethyl amine
- B. Ethyl chloride
- C. Acetaldehyde
- D. Acetone

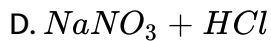
Answer: A



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15. Which of the following produces HNO_2 acid ?

- A. dil . $HNO_2 + HCl$
- B. $NaNO_2 + HCl$
- C. $HNO_3 + H_2SO_4$



Answer: B



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16. The amine which reacts with NaNO_2 and dil. HCl to give yellow oily compound is _____.

A. ethylamine

B. isopropylamine

C. sec- butylamine

D. dimethylamine

Answer: D



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17. Ethyl bromide reacts with excess of alcoholic ammonia the major product is

- A. ethyl amine
- B. diethylamien
- C. triethylamine
- D. tetraethylammonium bromide

Answer: A



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18. When ethylamine is heated with excess of acetic anhydride it give

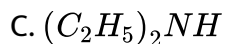
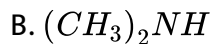
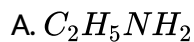
- A. ethyl alcohol
- B. diethyl ether
- C. monoacetyl diethyl amine
- D. monoacetyl ethylamine

Answer: D



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19. Dimethanamine is the IUPAC name of



Answer: B



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20. Methyl amine is obtained by reduction of nitromethane by using which of the following ?

A. $\text{Sn} + \text{HCl}$

B. Na and Hg

C. Ni and H_2

D. both (a) and (c)

Answer: D



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21. Reduction of alkyl nitrile with sodium and ethanal is called

A. Carbyl amine

B. Mendius reaction

C. Catalytic reduction

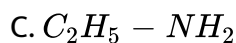
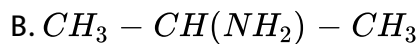
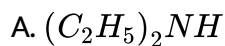
D. Clemmenson's reduction

Answer: B



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22. Which of the following gives secondary alcohol on reaction with nitrous acid ?



Answer: B



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23. Quaternary ammonium salt contains how many coordinate bonds ?

A. One

B. Two

C. Three

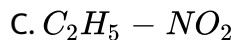
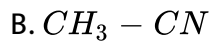
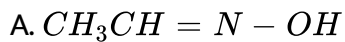
D. Four

Answer: A



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24. Which of the following is catalytically reduced to amine ?



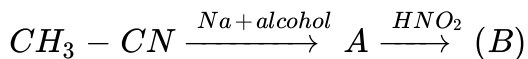
D. both (b) and (c)

Answer: C



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25. identify B in the following reaction



A. Ethanol

B. Ethanal

C. Acetic acid

D. Ethyl chloride

Answer: A



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26. The name of the compound C in the following series of reaction is



A. propan -1-ol

B. propan -2-ol

C. butan -1-ol

D. butan -2- o1

Answer: B



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27. How many moles of acetyl chloride are required for complete acetylation of ethanamine methanamine and triethanamine respectively ?

A. 0,1 and 2

B. 1,2 and 0

C. 1, 0 and 2

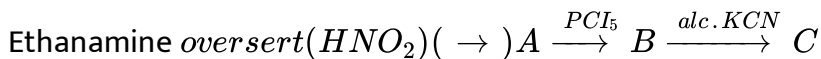
D. 1,1 and 0

Answer: D



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28. The name of the compound C in the following series of reaction of



A. methanenitrile

B. ethanenitrile

C. propanenitrile

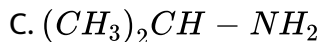
D. butanenitrile

Answer: C



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29. which of the following represented by C_3H_9N will not give alcohol with HNO_2



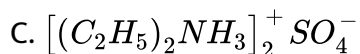
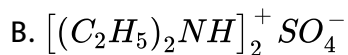
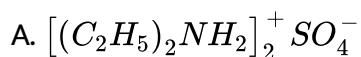
D. both (a) and (b)

Answer: D



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30. Diethyl amine reacts with sulphuric acid to give



Answer: A



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31. Quaternary ammonium salts are

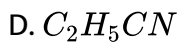
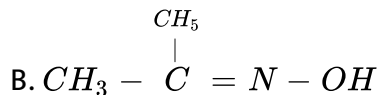
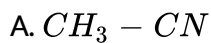
- A. tetraalkyl ammonium halides
- B. trialkyl ammonium halides
- C. dialkyl ammonium halides
- D. monoalkyl ammonium halides

Answer: A



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32. Which of the followign is acetaldoxime ?



Answer: C



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33. C_3H_9N cannot represent

- A. 1^0 amine
- B. 2^0 amine
- C. 3^0 amine
- D. quarternary salt

Answer: D



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34. Which of the following reaction will not give name

- A. $R - X + NH_3$
- B. $R - CH = N - OH + Na + \text{alcohol}$
- C. $R - CN + H_2O$



Answer: C



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35. The amine having two alkyl groups on nitrogen is called

- A. Primary amine
- B. Secondary amine
- C. Tertiary amine
- D. Isoalkyl amine

Answer: B



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36. How many molecules of CH_3I combines with one molecule of methyl amine to give quaternary ammonium salt ?

- A. One
- B. Two
- C. Three
- D. Four

Answer: C



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37. Structural formula for methyl amino methane is

- A. $CH_3 - NH_2$
- B. $(CH_3)_2NH^-$
- C. $(CH_3)_3N$
- D. $(CH_3)_4N^+ Cl^-$

Answer: B



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38. Possible isomers of C_3H_9N are

A. Three

B. Four

C. Five

D. Six

Answer: B



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39. Order of basicity of amines is

A. $ter > sec > pri$

B. *pri* > *sec* > *ter*

C. *sec* > *pri* > *ter*

D. *ter* > *pri* > *sec*

Answer: C



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40. Nitroso compound are

A. Yellow

B. Blue

C. Red

D. Orange

Answer: A



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