



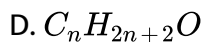
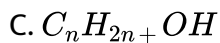
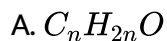
CHEMISTRY

BOOKS - NIKITA CHEMISTRY (HINGLISH)

ALDEHYDES, KETONES AND CARBOXYLIC ACIDS

SECTION - I : ALDEHYDES AND KETONES

1. Aldehydes are characterised by the general formula



Answer: A



2. Hybridisation of carbon in -CHO group is

A. sp

B. sp^2

C. sp^3

D. none of these

Answer: B



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3. Formalin is a

A. 100 % solution of HCHO

B. 40 % solution of HCHO

C. 60 % solution of HCHO

D. 40 % solution of CH_3COOH

Answer: B

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4. An aldehyde group can be present

- A. in between carbon chain
- B. at any position in carbon atom
- C. only at the end of carbon chain
- D. at the second carbon atom of the carbon chain

Answer: C

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5. Butanal is an example of

- A. primary alcohol
- B. secondary alcohol
- C. aliphatic aldehyde
- D. aliphatic ketone

Answer: C

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6. In IUPAC system aldehydes are called

- A. alkanes
- B. alkenes
- C. alkanals
- D. alkanols

Answer: C

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7. IUPAC name of mesityl oxide is

- A. 4-methyl penta - 3 - none
- B. 4-methylpente - 3- none
- C. 4-methylphent -3-en -2- one
- D. 4-methyl ent - 3-en - 1-one

Answer: C



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8. IUPAC name of pinacol is

- A. 2,3-dimethylbutan - 2,3-diol
- B. 2,3 -dimethylbutane -2,3-diol
- C. 2,3-dimethylbutan -2-ol

D. 2,3-dimethylbutan -3-ol

Answer: B

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9. IUPAC name of diacetone amine is

A. 2-methyl -4-ketopentan -2-amine

B. 4-amino - 4-methylpentan -2-one

C. 4-aminopentan - 2- one

D. 4-aminopentan - 3-one

Answer: B

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10. The IUPAC name of crotonaldehyde is

A. pentenal

B. but - 2 - en - 1 - al

C. but - 2 - an - 1 - al

D. but - 2 - en - 1 - ol

Answer: B

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11. IUPAC name of ketone is

A. alkanol

B. alkanal

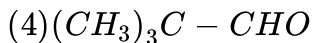
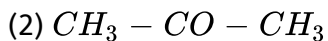
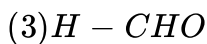
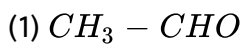
C. alkanone

D. alkylalkanoate

Answer: C

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12. Tautomerism is possible in



A. 1, 2

B. 2, 3

C. 3, 4

D. 1, 2, 4

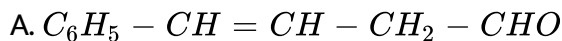
Answer: A

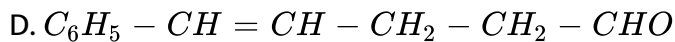
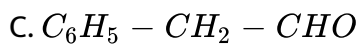
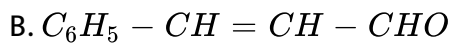


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13. Which of the following is

3 - phenylprop 2- en-1 - al ?





Answer: B

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14. IUPAC name of benzophenone is

A. 2-phenylpropenal

B. 3-phenylbutenal

C. diphenyl methanone

D. diphenyl ethanone

Answer: C

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15. Aldehyde group can occur,

- A. any where in carbon chain
- B. in the middle of carbon chain
- C. at only second carbon atom of carbon chain
- D. only at end of the carbon chain

Answer: D



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16. The carbon atom of carbonyl group is

- A. sp^3 - hybridised
- B. sp^2 - hybridised
- C. sp - hybridised
- D. sp^3d - hybridised

Answer: B



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17. $C_nH_{2n}O$ is general formula for

- A. aldehydes
- B. ketones
- C. all carbonyl compounds
- D. aldehyde and ketones

Answer: D



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18. IUPAC name of β -methyl butyraldehyde

- A. 2-methyl butanal

- B. 3- methyl butanal
- C. 2- methyl propanal
- D. 3- methyl pentanal

Answer: B

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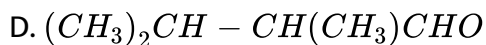
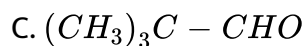
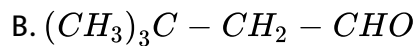
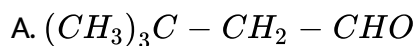
19. IUPAC name of isobutyraldehyde is

- A. 2-methylpropanone
- B. 2-methylpropanal
- C. 2-methylpropanone
- D. methylethanoate

Answer: B

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20. Which of the following is trimethyl acetaldehyde ?



Answer: C

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21. Aldehyde shows functional isomerism with

A. aliphatic ether

B. ketones

C. dimer of ethanoic acid

D. thio cyclic ether

Answer: B



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22. Pentan - 2- one and 3- methyl butan - 2- one are

- A. chain isomers
- B. position isomers
- C. metamers
- D. tautomers

Answer: C



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23. Tautomer of ethyl methyl ketone is

- A. but -2- en -2-ol

B. but -2- en -1- ol

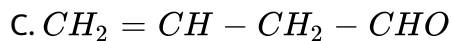
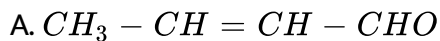
C. but -2- en -1- oic

D. prop -1- en -2- ol

Answer: A

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24. Which of the following is acrolein ?



Answer: B

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25. What is the IUPAC name of compound when $-CHO$ group is attached to neomyl group ?

- A. 2-methylpropanal
- B. 3-methylpropanal
- C. 2,2-dimethylbutanal
- D. 3,3-dimethylbutanal

Answer: D



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26. Which of the following is isophthalaldehyde ?

A. 

B. 

C. 

D. 

Answer: C



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27. What is the IUPAC name of compound when carbonyl carbon atom is attached to phenyl group and ethyl group

- A. propanonebenzene
- B. 1-phenylpropan-1-one
- C. 2-phenylpropan -1-one
- D. propiophenone

Answer: B



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28. What is IUPAC name of compound when ketone group is attached to one isopropyl group and one t-butyl group ?

A. 2,4,4-trimethyl - 3-pentanone

B. 2,2,4-trimethyl - 3-pentanone

C. 2, 4-dimethyl - 3-pentanone

D. 2, 2-dimethyl -3-pentanone

Answer: B

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29. IUPAC name of ethyl isopropyl ketone is

A. 4-methylpent 3-one

B. 2-methylpent - 3-one

C. 4-methylpent -2-one

D. 2-methylpent -2-one

Answer: B

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30. IUPAC name of acrolein is

- A. but -2-enal
- B. prop-2-enal
- C. pentanal
- D. 2- methylpropanal

Answer: B



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31. Keto-enol tautomerism is observed in

- A. CH_3OH
- B. CH_3COCH_3
- C. CH_3COOH

D. CH_3COOCH_3

Answer: B



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32. Ketones are isomeric with

- A. alcohols
- B. aldehydes
- C. ester
- D. acetic acid

Answer: B



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33. The structural formula of the compound isomeric with acetone is

A. CH_3CH_2CHO

B. CH_3CHO

C. CH_3CH_2OH

D. none of these

Answer: A

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34. $CH_3 - CO - CH_3$ and $CH_2 = COH - CH_3$ are

A. metamers

B. tautomers

C. geometrical isomers

D. optical isomers

Answer: B

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35. Aldehydes and ketone are

- A. tautomers
- B. chain isomers
- C. functional isomers
- D. position isomers

Answer: C



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36. Total number of isomeric aldehydes can be calculated by formula

- A. $I2^{n-2}$
- B. $I = 2^{n-3}$
- C. $I = 2^{n-2} - 1$

D. $I = 2^n$

Answer: B

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37. Total number of isomeric ketones can be calculated by formula

A. $I = 2^{n-3} - 1$

B. $I = 2^{n-2}$

C. $I = 2^{n-2} - 1$

D. $I = 2^n$

Answer: A

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38. Molecular formula C_3H_6O represents

- A. aldehydes
- B. ketones
- C. both 'a' and 'b'
- D. aldehydes and alcohols

Answer: C

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39. C_3H_6O shows

- A. chain isomerism
- B. position isomerism
- C. metamerism
- D. functional isomerism

Answer: D

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40. How many aldehydes are possible for molecular formula C_4H_8O ?

A. 2

B. 3

C. 4

D. 5

Answer: A



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41. How many ketones are possible for molecular formula C_4H_8O ?

A. 1

B. 2

C. 3

D. 4

Answer: A



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42. 2-pentanone and 3-pentanone are

A. chain isomers

B. position isomers

C. metamers

D. functional isomers

Answer: C



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43. Ketone never show

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

Answer: C

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44. In $>C=O$ group sigma bond is formed by

- A. sp^2 -p - overlapping
- B. sp^3 - p- overlapping
- C. sp-p- overlapping
- D. s-p-overlapping

Answer: A

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45. The π - bond in carbonyl group is formed by

- A. s-s-overlapping
- B. p-p- overlapping
- C. s-p- overlapping
- D. p-d- overlapping

Answer: B



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46. Butanone and butanal are

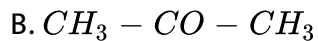
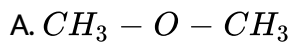
- A. chain isomers
- B. position isomers
- C. functional isomers

D. tautomers

Answer: C

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47. Metamerism is present in



Answer: D

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48. Calcium formate, on dry heating, produces

A. acetone

B. acetic acid

C. acetaldehyde

D. formaldehyde

Answer: D

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49. The reaction of RCN with RMgX following by hydrolysis gives

A. an aldehydes

B. an ketones

C. 2⁰ alcohols

D. 3⁰ alcohols

Answer: B

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50. An isomer of $C_3H_6Cl_2$ on boiling with aq. KOH give acetone. Hence, the isomer is ,

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

Answer: A



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51. 2, 2-dichloro butane on boiling with aq. Potash gives,

- A. butanal
- B. 2-butanone
- C. 2-butanol

D. butanoic acid

Answer: B



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52. Propanone can be obtained from oxidation of what ?

A. propan -2-ol

B. propan - 1-ol

C. butan - 2- ol

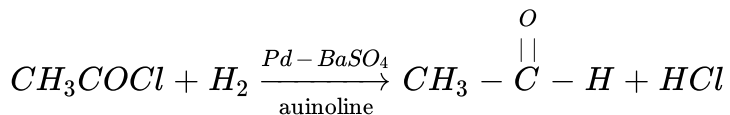
D. 2-methylbutan - 1 -ol

Answer: A



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53. The reaction



is called

- A. Cannizzaro's reaction
- B. Stephen's reduction
- C. Haloform reaction
- D. Rosenmund's reduction

Answer: D



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54. Rosenmund's reduction is used to prepare

- A. alcohol
- B. carboxylic acid

C. aldehyde

D. ketones

Answer: C



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55. Benzaldehyde is obtained from Rosenmund's reduction of

A. 

B. 

C. 

D. 

Answer: B



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56. 1,1 - dichlorocyclohexane on alkaline hydrolysis gives

- A. cyclohexane carbaldehyde
- B. cyclohexanone
- C. benzophenone
- D. cyclohexane carboxylic acid

Answer: B



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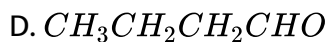
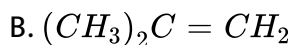
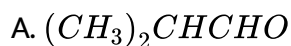
57. Rosenmund's reduction convert

- A. carboxylic acid to aldehyde
- B. ketone to 2° - alcohol
- C. acyl halide to ketone
- D. acyl halide to aldehyde

Answer: D

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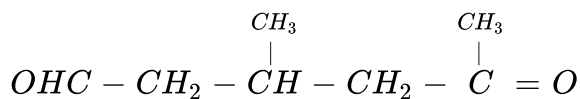
58. An optical active alcohol of formula $C_4H_{10}O$ on oxidation gives which of the following compound?



Answer: C

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59. A single compound of the structure



is obtainable from ozonolysis of which of the following cyclic compounds ?

A. 

B. 

C. 

D. 

Answer: A



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60. 2-methyl propanal is formed from isopropyl magnesium halide and what ?

A. CH_3CN

B. HCHO

C. HCN

D. CH_3COCH_3

Answer: C



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61. Calcium acetate on heating gives

A. acetone

B. formic acid

C. acetaldehyde

D. methane

Answer: A



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62. Which of the following is Colin's reagent ?

A. pyridine

B. chromium oxide

C. pyridinium chlorochromate

D. $KOH + KMnO_4$

Answer: C

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63. Dry distillation of a mixture of calcium acetate and calcium formate can form

A. formaldehyde

B. acetaldehyde

C. acetone

D. all of these

Answer: B

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64. Which of the following is not used in the preparation of ketone ?

- A. Oxidation of secondary alcohols
- B. Dehydrogenation of 2° alcohol
- C. Pyrolysis of calcium acetate
- D. Acid hydrolysis of alkyl cyanide

Answer: D



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65. Which of the following compounds is oxidised to prepare ethyl methyl ketone ?

- A. 1- butanol
- B. t-butyl alcohol
- C. 2- butanol

D. 2- propanol

Answer: C

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66. But - 1- yne on hydration in the presence of 40 % H_2SO_4 and 10 % $HgSO_4$ gives

A. 

B. 

C. 

D. 

Answer: B

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67. Isopropyl alcohol on oxidation forms

- A. acetone
- B. ether
- C. acetaldehyde
- D. ester

Answer: A



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68. Ethylidene chloride on hydrolysis with aq. NaOH gives

- A. CH_3CHO
- B. $CH_3COC_2H_5$
- C. C_2H_5OH
- D. $CH_3CH(OH)_2$

Answer: A



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69. Acetone is prepared by

- A. oxidation of acetic acid
- B. pyrolysis of acetic acid
- C. pyrolysis of calcium acetate
- D. oxidation of n-propyl alcohol

Answer: C



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70. Formation of acetaldehyde from ethanol is known as

- A. oxidation

B. substitution

C. addition

D. reduction

Answer: A



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71. Ketones can be obtained in one step by ,

A. hydrolysis of esters

B. oxidation of primary alcohols

C. oxidation of secondary alcohols

D. reaction of acid unhydride and alcohol .

Answer: C



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72. 2-butanone can be obtained heating a mixture of calcium salt of

- A. formic acid and butyric acid
- B. propionic acid and formic acid
- C. propionic acid and acetic acid
- D. acetic acid and formic acid

Answer: C



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73. On heating calcium acetate and calcium formate , the product formed is

- A. CH_3COCH_3
- B. CH_3CHO
- C. $HCHO + CaCO_3$
- D. $CH_3CHO + CaCO_3$

Answer: D



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74. Which of the following compound gives a ketone with Grignard reagent ?

- A. Formaldehyde
- B. Ethyl alcohol
- C. Methyl cyanide
- D. Methyl iodide

Answer: C



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75. Which one is not synthesized by Grignard reagent ?

- A. Primary alcohol
- B. Secondary alcohol
- C. A ketone
- D. An ester

Answer: D

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76. Ethylidene chloride on treatment with aqueous KOH gives ?

- A. Acetaldehyde
- B. Ethylene glycol
- C. Formaldehyde
- D. None

Answer: A

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77. Which poison the catalyst (Pd) at aldehyde stage in the reduction of acyl halide

A. PCC

B. $BaSO_4$

C. $SnCl_2$

D. $CuSO_4$

Answer: B



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78. Cyclohexanoyl chloride on reduction by poisoned catalyst gives

A. benzaldehyde

B. cyclohexanol

C. cyclohexanone

D. cyclohexyl methanal

Answer: D



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79. Stephen's reduction convert

A. acyl chloride to aldehyde

B. cyanide to aldehyde

C. cyanide to carboxylic acid

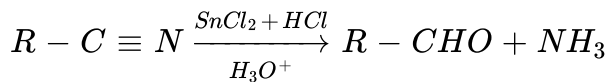
D. cyanide to ketones

Answer: B



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80. The reaction



- A. Rosenmund's reduction
- B. Stephen's reduction
- C. Clemmenson's reduction
- D. Cannizzaro's reaction

Answer: B



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81. Formonitrile is reduced by $SnCl_2 + HCl$ and product on acid hydrolysis gives

- A. formic acid
- B. methanal
- C. acetic acid

D. acetone

Answer: B

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82. Rosenmund's reduction carried out by using

A. H_2 / Ni

B. $Na. Hg + H_2O$

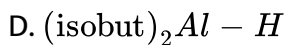
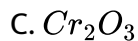
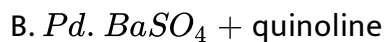
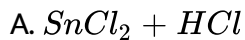
C. $LiAlH_4$

D. $Pd - BaSO_4 +$ quinoline

Answer: D

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83. Conversion of ester to aldehyde which of the following reagent is used ?

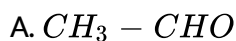
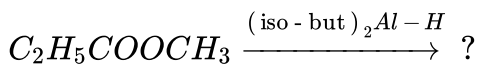


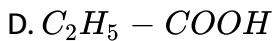
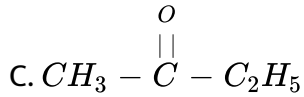
Answer: D



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84. The product of following reaction is

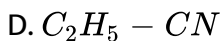
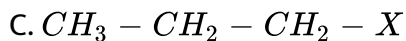
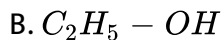
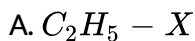




Answer: B

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85. Compound A is reacted with KCN and followed by reduction using $SnCl_2 + HCl$ and successive hydrolysis gives propanal. The compound A is



Answer: A

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86. Acetaldehyde is

- A. oxidising agent
- B. reducing agent
- C. both oxidising and reducing agent
- D. none of these

Answer: C



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87. Ethyl cyanide is reduced by di-isobutyl aluminium hydride gives

- A. propanal
- B. propanoic acid
- C. propan - 1- amine
- D. propane

Answer: A

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88. Methyl benzoate is reduced by di - isobut aluminium hydride gives

A. 

B. 

C. 

D. 

Answer: C

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89. Pent -3-ene - 1- nitrile on reduction by di-isobutyl aluminium hydride gives

A. 

B. 

C. 

D. 

Answer: B

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90. Etard oxidation convert toluene to

A. benzoic acid

B. acetophenone

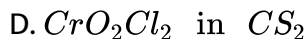
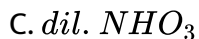
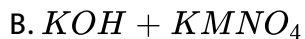
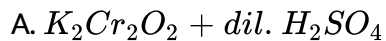
C. benzaldehyde

D. benzoyl chloride

Answer: C

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91. Oxidising agent in Etard oxidation is



Answer: D



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92. Oxidation of toluene by chromium oxide in acetic anhydride gives

A. benzaldehyde

B. benzoic acid

C. benzophenone

D. acetophenone

Answer: A

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93. p-nitro toluene convert p - nitro benzaldehyde by using

A. $KOH + KMnO_4$

B. CrO_3 in $(CH_3CO)_2O$

C. $SnCl_2 + HCl$

D. Pd - $BaSO_4$ + quinoline

Answer: B

 [View Text Solution](#)

94. Toluene is subjected to Gatterman - Koch reaction produces

- A. benzaldehyde
- B. benzoic acid
- C. 2- methyl benzaldehyde
- D. acetophenone

Answer: C

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95. Ethyl acetate is reduced by di -isobutyl aluminium hydride gives

- A. 
- B. 
- C. 
- D. 

Answer: A

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96. Compound A is reacted with C_2H_5-X gives B . The compound B is reduced by di-isobutyl aluminium hydride gives butanal. The compound A is

A. 

B. 

C. 

D. 

Answer: B



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97. Benzal chloride on hydrolysis gives

A. benzoic acid

B. benzaldehyde

C. benzo chloride

D. benzyl chloride

Answer: B



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98. Toluene on side chain chlorination and followed by hydrolysis gives

A. Toly chloride

B. benzaldehyde

C. p- chloro toluene

D. acetophenone

Answer: B



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99. Side chain chlorination of methyl benzene followed by hydrolysis gives

- A. phenol
- B. aniline
- C. anisole
- D. bezaldehyde

Answer: D



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100. A reagent which reacts differently with CH_2O , C_2H_4O , C_3H_6O is

- A. NH_2OH
- B. $C_6H_5NHNH_2$
- C. NCN
- D. NH_3

Answer: D



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101. Which of the following has maximum reactivity towards HCN ?

A. HCHO

B. CH_3CHO

C. CH_3COCH_3

D. $CH_3COC_2H_5$

Answer: A



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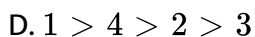
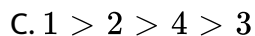
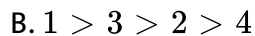
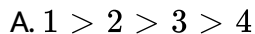
102. Consider the following substances

(1) $HCHO$

(2) CH_3CHO



The correct order of reactivity towards nucleophilic addition reaction is



Answer: A



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103. The reagent with which both acetaldehyde and acetone react easily is

A. Fehling solution

B. Grignard's reagent

C. Schiff's reagent

D. Tollen's reagent

Answer: B



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104. In presence of conc. Alkali formaldehyde undergoes

- A. Aldol condensation
- B. Cannizzaro's reaction
- C. Esterification
- D. Wurtz reaction

Answer: B



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105. The Cannizzaro's reaction is not given by

- A. benzaldehyde

B. chloral

C. methanal

D. ethanal

Answer: D

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106. Treatment of butanal with dilute NaOH solution gives



Answer: C

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107. The products of the reaction of two molecules of HCHO with strong potash is

- A. CH_3OH and $HCOOH$
- B. CH_3OH and $HCOONa$
- C. CH_3OH and $HCOOK$
- D. C_2H_5OH

Answer: C



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108. Acetaldehyde, when treated with which among the following reagents does 'not' undergo addition reaction?

- A. ammonia
- B. hydroxyl amine
- C. ammoniacal silver nitrate

D. semicarbazide

Answer: C

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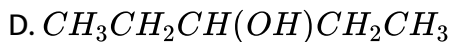
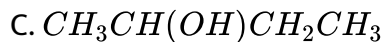
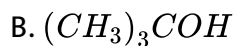
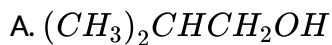
109. The formation of cyanohydrin from ketone is an example of :

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

Answer: B

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110. Acetone on treatment with CH_3MgI on further hydrolysis gives,



Answer: B

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111. Base catalysed aldol condensation occurs with

A. propanal

B. butanal

C. ethanal

D. all of these

Answer: D

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112. Treatment of propionadehyde with dilute NaOH gives :

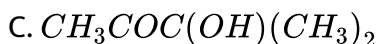
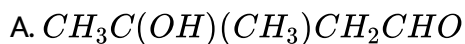


Answer: B



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113. Ethanal and propanone undergoes aldol condensation reaction in presence of dilute alkali to form



D. $CH_3COCH(CH_3)CH_2OH$

Answer: B



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114. Iodoform test is not given by

A. ethanol

B. ethanal

C. acetone

D. 3- pentanone

Answer: D



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115. Dimethyl ketones are usually characterised through

A. the Tollen's reagent

B. the Schiffs reagent

C. the iodoform test

D. Cannizzaro's reaction

Answer: C

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116. Grignard reagent adds to :

A. $>C=O$

B. $>C=S$

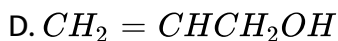
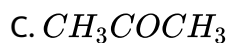
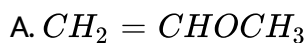
C. $-C \equiv N$

D. all of the above

Answer: D

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117. An organic compound of formula, C_3H_6O forms phenyl hydrazone, but gives negative Tollen's test . The compound is



Answer: C



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118. Which does not react with Fehling solution ?

A. Ethanal

B. Glucose

C. Formic acid

D. Benzaldehyde

Answer: D



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119. The reaction of RMgX with a ketone, followed by treatment with H_3O^+ forms

A. 1° alcohol

B. 2° alcohol

C. 3° alcohol

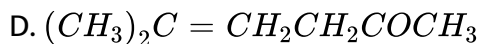
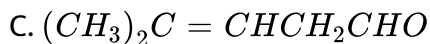
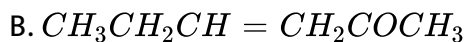
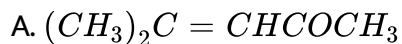
D. alkane.

Answer: C



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120. When acetone is heated with ammonia gives diacetone amine, the intermediate compound formed in this reaction is ,



Answer: A



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121. $>C=O$ is converted into $-CH_2-$ by

A. Clemmenson reduction

B. H_2/Ni

C. Mendius reduction

D. $NaHg + H_2O$ reaction .

Answer: A



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122. Which of the following give self redox reaction ?

A. Methanal

B. Ethanal

C. Butanal

D. Methanol

Answer: A



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123. Which of the following reagent react with CH_2O forming urotropine

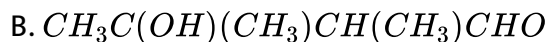
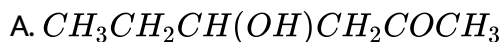
?



Answer: B

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124. Propanal and propanone undergoes condensation reaction in presence of dil . KOH to form,



D. none of these

Answer: A

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125. Which one of the following reaction yields diacetone alcohol from a carbonyl compound ?

- A. Cannizzaro's reaction
- B. Catalytic hydrogenation
- C. Aldol condensation
- D. Oxidation

Answer: C

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126. When $H\text{-CHO}$ reacts with NH_3 , urotropine is formed. In this molecule how many C-C bonds are present ?

- A. 4

B. 2

C. 0

D. 6

Answer: C



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127. Acetone shows similarity with acetaldehyde in reacting to

A. Tollen's reagent

B. Schiff's reagent

C. Fehling solution

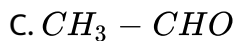
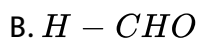
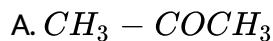
D. Grignard reagent

Answer: D



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128. Cyanohydrine of the following compound on hydrolysis give optically active compound.



D. All of these

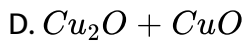
Answer: C



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129. When ethanal is heated with Fehling's solution, it gives a precipitate of





Answer: C

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130. Benzene is reacted with carbon monoxide in HCl in the presence of catalyst, cupric chloride gives

A. 

B. 

C. 

D. 

Answer: C

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131. Which of the following is used to prepare ketone from acyl chloride

A. $R-MgX$

B. R_2Cd

C. $CO + HCl$

D. CrO_3

Answer: B



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132. Dimethyl cadmium and acetyl chloride produces

A. acetone

B. t-butyl alcohol

C. 2° - propyl alcohol

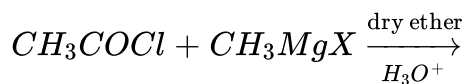
D. n-propyl alcohol

Answer: A



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133. Product of the following reacting is



A. 

B. 

C. 

D. 

Answer: B



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134. Benzonitrile and phenyl magnesium bromide produces

A. 

B. 

C. 

D. 

Answer: A

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135. Friedel Creft acetylation of benzene gives

A. benzophenone

B. acetophenone

C. alkyl benzene

D. diphenyl

Answer: B

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136. Diphenyl methanone is obtained from

A. 

B. 

C. 

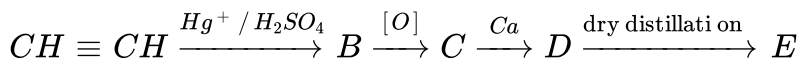
D. 

Answer: A



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137. In the following sequence of reaction end product is .



A. acetaldehyde

B. propanone

C. methanal

D. ethanoic acid

Answer: B

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138. The correct order of solubility of following compound is

(1) $H - CHO$ (2) $CH_3 - CHO$

(3) $CH_3 - CH_2 - CHO$ (4) $CH_3 - COCH_3$

A. $4 > 3 > 2 > 1$

B. $1 > 2 > 4 > 3$

C. $1 > 2 > 3 > 4$

D. $1 > 4 > 2 > 3$

Answer: C

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139. Acetylene on hydration gives compound A, which on Clemmenson's reduction gives ?

- A. Ethane
- B. Ethyl alcohol
- C. Acetaldehyde
- D. Ethene

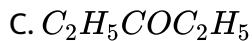
Answer: A



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140. Compound 'A' has molecular formula $C_5H_{10}O$ reduce Tollen's reagent on oxidation gives monocarboxylic acid with same number of carbon atoms . The compound 'A' is

- A. $CH_3COCH(CH_3)_2$
- B. $CH_3(CH_2)_3 - CHO$



Answer: B

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141. Wolf - Kishner reduction is

A. reduction of carbonyl compound in to alcohol

B. reduction of carbonyl compound in to alkene

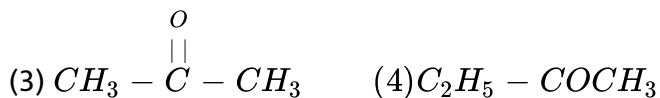
C. reduction of carbosyl compound in to alkane

D. reduction of nitro compound into aniline

Answer: C

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142. Among the following compound the reactivity order is



A. $1 > 2 > 4 > 3$

B. $4 > 3 > 2 > 1$

C. $1 > 2 > 3 > 4$

D. $1 > 3 > 4 > 2$

Answer: C



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143. Less reactivity of ketone is due to

A. $+I$ inductive effect decrease positive charge on carbonyl carbon atom

B. steric effect to two bulky alkyl groups

C. sp^2 hybridised carbon atom of carbonyl carbon atom

D. both a and b

Answer: D

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144. To distinguish between acetone and iso-propyl alcohol, which of the following reagent can help

A. $NaCl$

B. $NaOH$

C. Na_2CO_3

D. $NaHSO_3$

Answer: D

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145. Which of the following statement is wrong ?

- A. aldehyde and ketones are reducing agents
- B. aldehyde and ketones are nonpolar compounds
- C. aldehydes are more reactive than ketones
- D. aldehydes and ketones are reduced to alcohol

Answer: B



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146. Which of the following statement is correct regarding the aldol condensation ?

- A. All aldehydes give this reaction
- B. Ketones do not give this reaction
- C. This reaction proceeds in presence of strong alkali

D. Ketones, in which α - hydrogen atom is present , give this reaction

Answer: D

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147. If formaldehyde and KOH are heated then we get

A. methane

B. acetylene

C. ethyl formate

D. methyl alcohol

Answer: D

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148. Benzaldehyde is converted to benzyl alcohol by

- A. Wurtz reaction
- B. Fitting reaction
- C. Wurtz fittings reaction
- D. Cannizzaro's reaction

Answer: D

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149. Aldehydes are oxidised to acids by

- A. potassium dicromate
- B. Tollen's reagent
- C. Fehling's solution
- D. all of these

Answer: D

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150. Formaldehyde + ammonia \rightarrow Y, the product Y is

- A. methanol
- B. formamide
- C. para-formaldehyde
- D. hexamethylene tetraamine

Answer: D



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151. Acetaldehyde and acetone can be identified by

- A. Schiff's test
- B. Lucas test
- C. Iodoform test

D. Bromoform test

Answer: A

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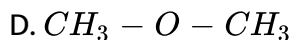
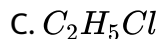
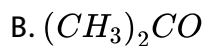
152. Ethanal reacts with alkali to give 3-hydroxy butanal . The reaction is

- A. Aldol condensation
- B. Claisen condensation
- C. Cannizzaro's reaction
- D. Clemmenson reduction

Answer: A

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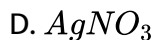
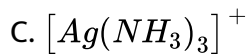
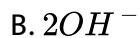
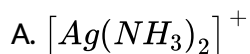
153. Which of the following undergoes haloform reaction ?



Answer: B

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154. Which of the following cation is involved in Tollens reagent ?



Answer: A

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155. Diethyl ketone and a dimethyl ketone can be distinguished with

- A. Tollen's reagent
- B. Fehling's solution
- C. Schiff's reagent
- D. Haloform test

Answer: D



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156. Tollen's reagent is

- A. ammonical $CuSO_4$
- B. ammonical $AgNO_3$
- C. alkaline solution containing complex of copper nitrate

D. none of these

Answer: B

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157. Reduction of a keto group to a methylene group is converted by using

A. $ZnHg + conc. HCl$

B. $NaHg + water$

C. $Sn + conc. HCl$

D. $Zn + CH_3COOH$

Answer: A

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158. Which statement is false regarding acetaldehyde and acetone ?

- A. Both reduce ammoniacal silver nitrate to silver mirror
- B. Both react with hydroxylamine to form oximes
- C. Both react with hydrazine to form hydrazone derivative
- D. Both react sodium bisulphite to form addition product

Answer: A



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159. Which of following give haloform test ?

- A. $CH_3 - CHO$
- B. $C_2H_5 - CHO$
- C. $H - CHO$
- D. $C_2H_5 - CO - C_2H_5$

Answer: A



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160. Which of the following compounds does not contain an - OH group ?

A. Alcohol

B. Phenol

C. Aldehyde

D. Carboxylic acid

Answer: C



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161. $HCHO$ and CH_3CHO differ from each other towards

A. Schiff's reagent

B. Fehling solution

C. ammonia

D. ammonical $AgNO_3$

Answer: C

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162. The most active carbonyl compound is

A. $HCHO$

B. CH_3CHO

C. CH_3COCH_3

D. C_2H_5CHO

Answer: A

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163. Out of

(1) butane (2) butan -1- ol

(3) butanal (4) butanone .

The decreasing order of their B.P is

A. $1 > 2 > 3 > 4$

B. $2 > 4 > 4 > 1$

C. $2 > 3 > 4 > 1$

D. $4 > 2 > 3 > 1$

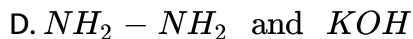
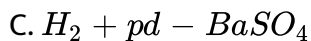
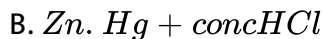
Answer: C



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164. Acetone is converted into propane by Wolff- Keshner reduction by using reagent

A. $LiAlH_4$

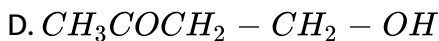
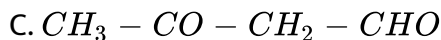
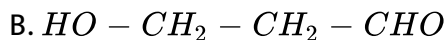


Answer: D

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165. A neutral compound $C_4H_8O_2$, reduce Fehling's solution, and liberate H_2 gas when treated with sodium metal and give positive iodoform test.

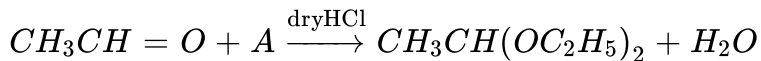
The compound is



Answer: A

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166. In the reaction



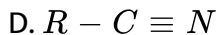
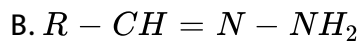
The compound A is

- A. propan-1-ol
- B. ethanol
- C. methanol
- D. $C_2H_5 - O - C_2H_5$

Answer: B

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167. During reduction of aldehyde with hydrazine and KOH, the first is the formation of



Answer: B

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168. Acetals are

A. aldehyde

B. ketones

C. ethers

D. diether

Answer: D

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169. Pentan -3- en-2-one is reduced by $LiAlH_4$ gives

A. pent -4- en-2-ol

B. pent -3-en-1-ol

C. pent -2-ol

D. pent -3-en-2-ol

Answer: D



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170. Which is best solvent

A. $H - CHO$

B. CH_3COCH_3

C. $CH_3 - CHO$

D. CH_3COOH

Answer: B



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171. Prop 1,3 - diphenyl 2 - en - 1 - one is crossed condensation product.

Which is obtained from

- A. benzophenone
- B. Acetophenone
- C. benzaldehyde
- D. Acetphenone and benzaldehyde

Answer: D



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172. In mechanism of aldol condensation reaction the second step is

- A. abstraction of α - H atom carbon of aldehyde by base to form carbanion
- B. The attack of carbanion on carbonyl carbon atom of another molecule to form alkoxide ion
- C. The attack of carbanion on carbonyl carbon atom of another molecule to form oxocation
- D. Alkoxide ion take proton from water to form β - hydroxy aldehyde

Answer: B



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173. Formaldehyde is used as

- A. solvent

B. antiseptic

C. disinfectant

D. disinfectant and preservation

Answer: D

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174. Carbonyl group in aromatic aldehyde and ketone is

A. o-directing

B. p-directing

C. o-and p- directing

D. m - directing

Answer: D

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175. Benzaldehyde on nitrating gives

- A. o-nitrobenzaldehyde
- B. p- nitrobenzaldehyde
- C. mixture of a and b
- D. m- nitrobenzaldehyde

Answer: D



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176. But -2 - en -1- ol on oxidation by using PCC gives

- A. Butan -1- ol
- B. butanal
- C. but -2- en- al
- D. butan -2-one

Answer: C



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177. Methyl ketone group is identified by

- A. Lucas test
- B. Haloform test
- C. Hinsberg test
- D. Millon's test

Answer: B



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178. Match the List -I and II and select the correct answer

List-I

1. Cannizzaro's reaction
2. Stephen's reaction
3. Clemmenson reduction
4. Rosenmund's reduction

List -II

- (A) $SnCl_2 + HCl$
- (B) 50 % $NaOH$
- (C) $Pd - BaSO_4 +$ quinoline
- (D) $Zn. Hg + Conc. HCl$

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

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

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

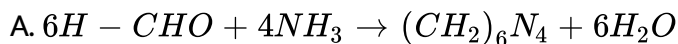
D. 1 - D, 2 - A, 3 - C, 4 - B

Answer: C



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179. Which of the following is not correct reaction ?



B. 

C. 

D. 

Answer: B

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180. What is product formed when cyclohexane carbaldehyde undergoes aldol condensation ?

A. 

B. 

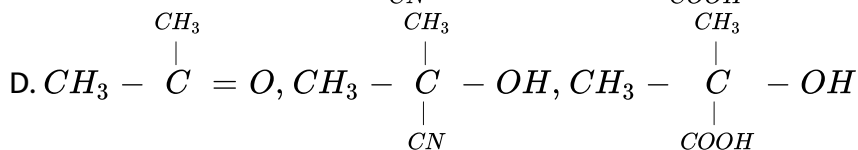
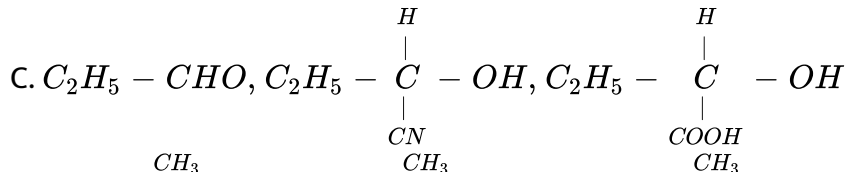
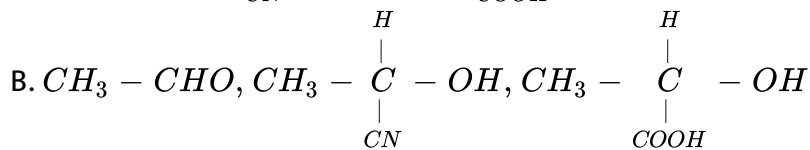
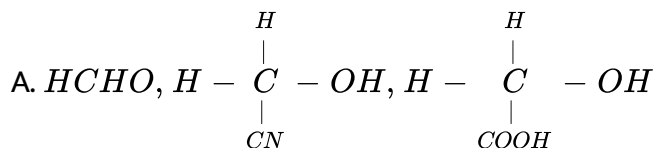
C. 

D. 

Answer: B

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181. A carbonyl compound 'A' react with hydrogen cyanide to give cyanohydrin 'B' which on acid hydrolysis gives optically active α - hydroxy propanoic acid 'C' Compounds A, B, C respectively are ,



Answer: B

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182. Acetone + A \rightarrow Oxime of acetone

Acetone + B \rightarrow Propane

Acetone + C → Pinacol .

A, B and C are

A. $NH_2 - OH, Mg, Zn. Hg + conc. HCl$

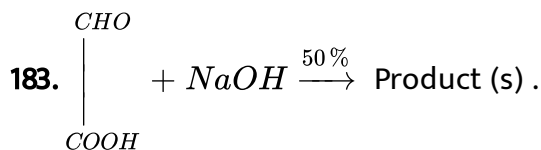
B. $NH_2 - OH, Zn. Hg + conc. HCl, Mg$

C. $Mg, NH_2 - OH, Zn. Hg + conc. HC$

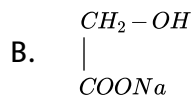
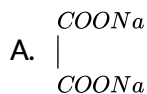
D. $NH_2 - OH, Na. Hg + H_2O, Mg$

Answer: B

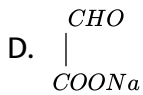
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Identify the products



C. both a and b



Answer: B

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184. Structure $C_8H_8Cl_2$ an alkaline hydrolysis gives a product which does not give iodoform test but give silver mirror test ,is

A. 

B. 

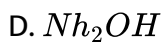
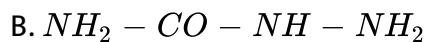
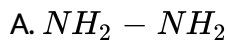
C. 

D. 

Answer: D

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185. Which of the following reagent to get sp^3 - hybridised carbon atom from sp^2 - hybridised carbon atom ?



Answer: C



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186. An alkene (A) can give Cannizzaro's reaction. The compound (A) is



Answer: B

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187. Which of the following alkane cannot be prepared by Clemmenson's reduction of ketones ?

A. 

B. 

C. 

D. 

Answer: A

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188. Reaction of aldehyde with $NH_2 - OH$ will be fastest at which of the following P_H

A. 1

B. 6

C. 7

D. 8

Answer: B



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189. In Cannizzaro's reaction fo formaldehyde involves an

A. Intramolecular shift of proton

B. Intramolecular shift of hydride

C. Intermolecular shift of proton

D. Intermolecular shift of hydride

Answer: B



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190. Consider two aldehydes



The correct statement is /are

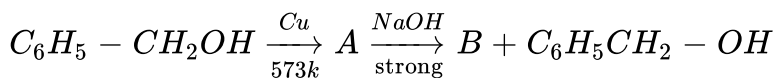
- A. both undergoes aldol condensation
- B. both do not undergoes aldol condensation
- C. only (1) undergoes aldol condensation
- D. only (2) undergoes aldol condensation

Answer: C



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191. Final product 'B' in the following sequence of reaction



- A. benzaldehyde

B. acetophenone

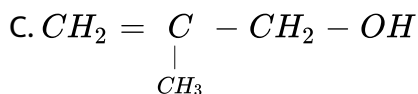
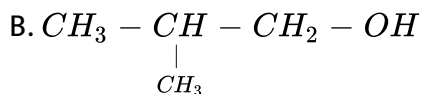
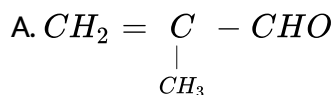
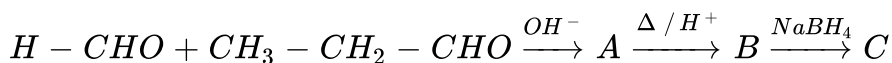
C. sodium phenoxide

D. sodium benzoate

Answer: D

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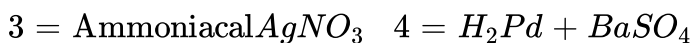
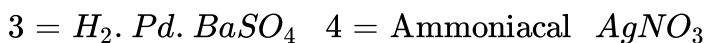
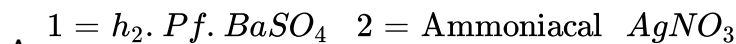
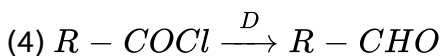
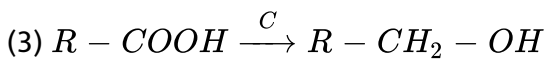
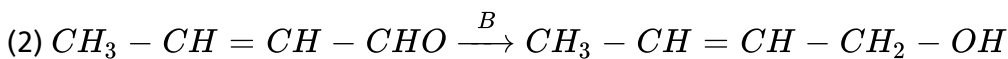
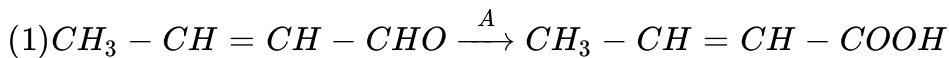
192. The final product 'C' in the following reaction



Answer: C

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193. Find out A, B, C, D in following reaction

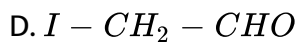
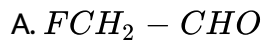


Answer: C



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194. Which among the following is most reactive in nucleophilic addition ?

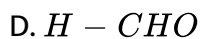
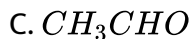
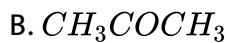


Answer: A



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195. Which of the following carbonyl compound is most polar ?



Answer: D



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196. Which of the following isomeric compounds is most reactive ?

A. 

B. 

C. 

D. all are equally reactive

Answer: A



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197. The reagent which oxidise aldehyde and ketone is

A. Tollen's reagent

B. Fehling's solution

C. Schiff's reagent

D. $K_2Cr_2O_7 + H_2SO_4$

Answer: D

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198.3 - methyl cyclohexene on oxidation will give

A. 

B. 

C. 

D. 

Answer: D

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199. Cyclohexanone is treated with $Ba(OH)_2$ gives

A. 

B. 

C. 

D. 

Answer: C

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200. Mixture of ethanal and propanal is subjected to aldol condensation ,
the product formed are

A. 1

B. 2

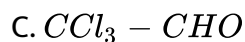
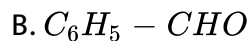
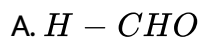
C. 3

D. 4

Answer: D

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201. Aldehyde which shows Cannizzaro's reaction is



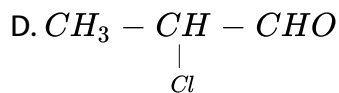
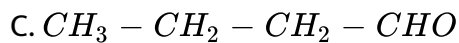
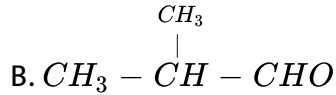
D. all of these

Answer: D

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202. The aldehyde having $\alpha - H$ atom gives Cannizzaro's reaction is





Answer: B

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203. Mixture of $H - CHO$ and $C_6H_5 - CHO$ is treated with conc. $NaOH$ then self redox reaction involves

- (1) oxidation of $H - CHO$
- (2) oxidation of $C_6H_5 - CHO$
- (3) reduction of $H - CHO$
- (4) reduction of $C_6H_5 - CHO$

A. 1, 3

B. 1, 2

C. 1, 4

D. 2, 3

Answer: C



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204. When ethanoyl chloride is reduced with hydrogen using Pd deposited over $BaSO_4$ catalyst it forms

A. ethane

B. chloroethane

C. ethanal

D. ethanol

Answer: C



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205. Crotonaldehyde is easily oxidised to crotonic acid using

A. alkaline $KMnO_4$

B. Tollen's reagent

C. acidic $KMnO_4$

D. CrO_3

Answer: B



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206. Which of the following aldehyde forms stable hydrate ?

A. Trichloroacetaldehyde

B. acetaldehyde

C. formaldehyde

D. propanal

Answer: A



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207. An unknown alkyl 'A' reacts with alcoholic KOH to produce C_4H_8 . Ozonolysis of the hydrocarbon gives one mole of propanal and one mole of methanal the correct structure of 'A' is

A. 

B. 

C. 

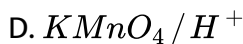
D. 

Answer: A



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208. $(CH_3)_2C = CHCOCH_3$ can be oxidised to $(CH_3)_2C = CH - COONa$ by

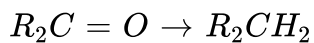


Answer: C



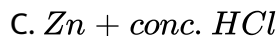
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209. For the following conversion which can be used



A. Clemmenson's reaction

B. Wolff Kishner reaction



D. both 'a' and 'b'

Answer: D



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210. Benzaldehyde can be prepared by hydrolysis of

A. Benzyl chloride

B. Benzal chloride

C. Benzotrichloride

D. benzonitrile

Answer: B



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211. 1 - phenyl ethan -1-ol is prepared by reaction of benzaldehyde with

- A. methyl bromide
- B. ethy magnesium iodide
- C. methyl magnesium bromide
- D. methyl iodide and zinc metal

Answer: C

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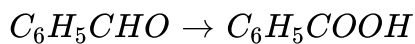
212. Oxidation of toluene to benzaldehyde by chromyl chloride is called

- A. Rosenmund reaction
- B. Wurtz reaction
- C. Etard reaction
- D. Fittig reaction

Answer: C

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213. Which of the following reagent convert



- A. Fehling solution
- B. PCC
- C. Tollen's reagent
- D. $H_2 + Ni$

Answer: C



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214. Hydrogenation of benzoyl chloride in the presence of Pd on $BaSO_4$ gives

- A. benzyl alcohol
- B. benzoic acid

C. benzaldehyde

D. phenol

Answer: C

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215. An organic compound does not give a precipitate with 2,4 - DNP and does not react with sodium metal . It could be

A. $CH_3 - CH_2 - CHO$

B. CH_3COCH_3

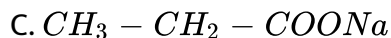
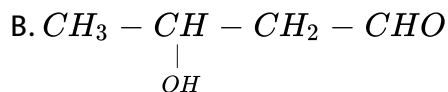
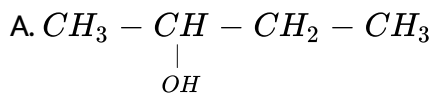
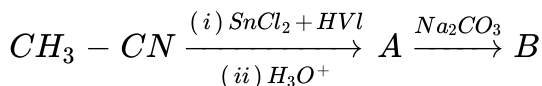
C. $CH_3 - CHO$

D. $CH_3OC_2H_5$

Answer: D

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216. What is 'B' in the following reaction ?



Answer: B



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217. Under Wolff- Kishner reduction the conversion may be brought about are

A. benzophenone to diphenyl methane

B. benzaldehyde to benzyl alcohol

C. cyclohexanone to cyclohexene

D. cyclohexanone to cyclohexanol

Answer: A

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218. When formaldehyde react with ethyl amine , it gives

A. formaldehyde imine

B. formaldehyde imine

C. dimethyl amine

D. diethylmaine

Answer: B

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219. Imine derivatives of aldehyde and ketone is called as

- A. Schiff's reagent
- B. Fehling's reagent
- C. Schiff's base
- D. Schiff's acid

Answer: C

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220. Acetone on condensation gives

- A. mesitylene
- B. mesityl oxide
- C. propanal
- D. di-isopropyl ether

Answer: B

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221. A carbonyl compound with molecular weight 86, does not reduce Fehling's solution, but form crystalline bisulphite derivatives and gives iodoform test. The possible compound can be

- A. Pentan -2 - one and pentan - 3- one
- B. Pentan -2- one and pentan -3- one
- C. Pentanal
- D. pent -3- one

Answer: B

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222. $CH_3 - CH = CH - CHO$ is oxidised to $CH_3 - CH = CH - COOH$ using oxidising agent

- A. alkaline $KMnO_4$

B. $K_2Cr_2O_7 + conc. H_2SO_4$

C. dil NHO_3

D. ammoniacal $AgNO_3$

Answer: D

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223. Ketones $R - \overset{O}{\parallel} C - R'$ where R = R' alkyl group can be obtained in one step by

A. oxidation of 1° alcohol

B. hydrolysis of ester

C. hydrolysis of acid anhydride

D. oxidation of 2° alcohol

Answer: D

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224. Among the given compound most susceptible to nucleophilic attack at carbonyl group is

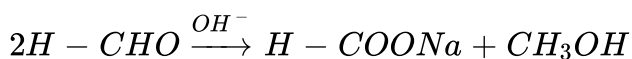


Answer: A



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225. The reaction given below is



The slowest step is

A. Wurtz's reaction

B. Cannizzaro's reaction

C. Fittig's reaction

D. Etard oxidation

Answer: B

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226. Which of the following does not used to convert ketone to secondary alcohol ?

A. $LiAlH_4$

B. $NaBH_4$

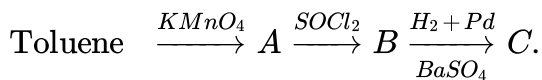
C. $H_2 / Pd - BaSO_4$

D. $Na + C_2H_5OH$

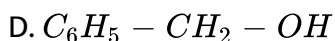
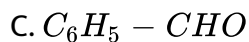
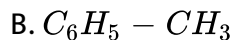
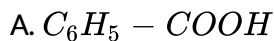
Answer: C

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227. In the following sequence of reaction ,



The product C is



Answer: C

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228. Which of the following is correct ?

A. reduction of any aldehyde gives 2° alcohol

B. reduction of any ketone gives tertiary alcohols

C. Wolff - Kishner reduction convert $>C=O$ to $-CH_2-OH$

group

D. Ozonolysis of alkene in the presence of zinc gives aldehydes or

ketones/mixture of aldehyde and ketones

Answer: D

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229. Ozonolysis of C_7H_{14} give methanal and 2- methyl pentan -3- one .

The C_7H_{14} is

A. 2- ethyl 3 - methyl but -1- ene

B. 3- ethyl -2- methyl but -3- ene

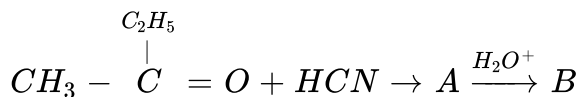
C. hept -1- ene

D. hept -2- ene

Answer: A

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230. In the reaction



The compound B is

- A. it is a tautomer of ketone
- B. it is a functional isomer of ketone
- C. do not show optical activity
- D. show optical activity

Answer: D

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231. A substance $C_4H_{10}O$ yield on oxidation C_4H_5O which gives oxime and positive iodoform test.

The original substance on treatment with conc. H_2SO_4 gives C_4H_8 . The structure of compound is

A. 

B. 

C. 

D. 

Answer: C

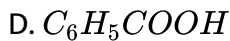
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232. Which of the following react with $NaOH$ produces acid and alcohol ?

A. C_6H_5CHO

B. $CH_3 - CHO$

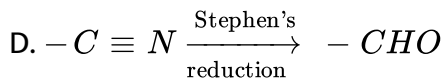
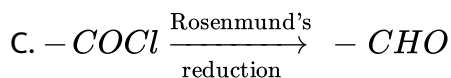
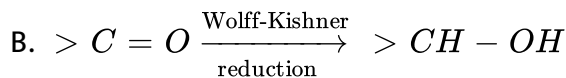
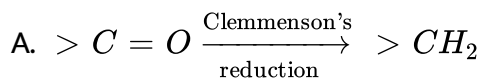
C. CH_3COOH



Answer: A

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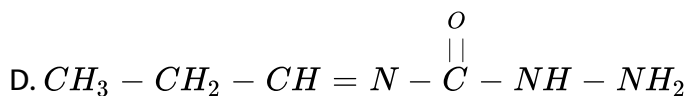
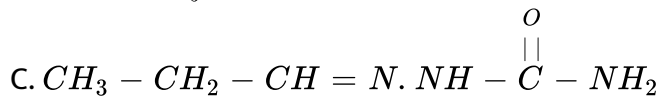
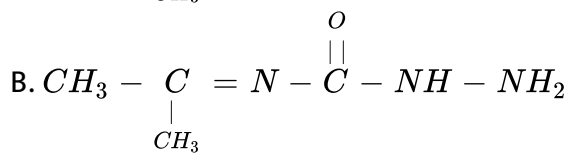
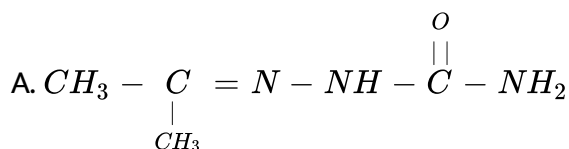
233. Which of the following is not correct matched ?



Answer: B

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234. Compound A of formula C_3H_8O is treated with acidic $KMnO_4$ to form product B of formula C_3H_6O , which form shining silver mirror on warming with ammonical $AgNO_3$, when B is treated with $NH_2CONHNH_2$ in HCl and sodium acetate gives the product C. Identify the structure of C.



Answer: C



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235. Which one of the following oxidised to corresponding carbonyl compound ?

A. 

B. 

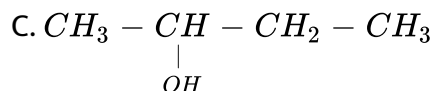
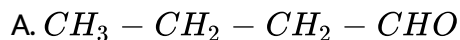
C. 

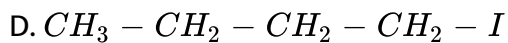
D. 

Answer: A

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236. 2,2- diethoxy butane is obtained from ethanol and what ?





Answer: B

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237. Which reagent is used to convert butan -2- one to propionic acid ?

A. Tollen's reagent

B. Fehling's solution

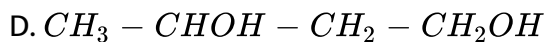
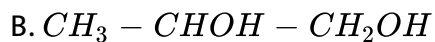
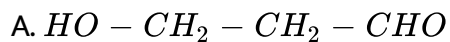
C. acidic $KMnO_4$

D. PCC

Answer: C

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238. The compounds HCHO and CH_3CHO on intermolecular aldol condensation gives .



Answer: A

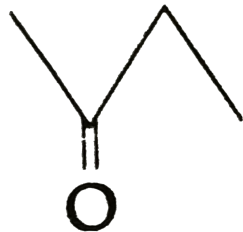


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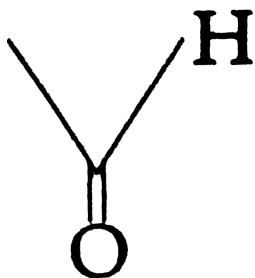
239. Nucleophilic addition reaction is most favored in



C.



D.



Answer: D



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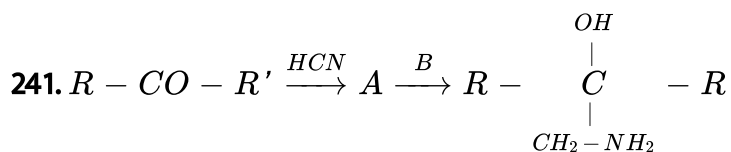
240. The smallest ketone and its functional isomer are reacted with $NH_2 - OH$ to form oxime

- A. two different oxime are formed
- B. three different oxime are formed
- C. two oximes are optically active

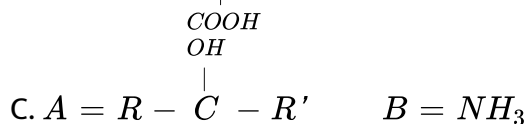
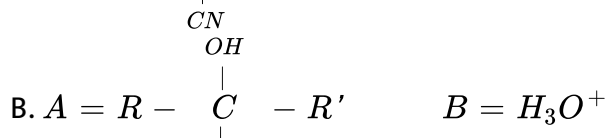
D. all oximes are optically active

Answer: A

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A and B are



Answer: A

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242. On reaction with ketone with hydroxyl amine give ketoxime which on reduction produces

- A. carboxylic acid
- B. 1° amine
- C. 2° - amine
- D. amide

Answer: B



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243. Aldehyde with $NH_2 - NH_2$ forms

- A. aniline
- B. nitrobenzene
- C. hydrazine

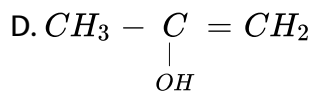
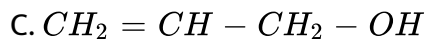
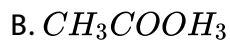
D. hydrazone

Answer: D

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244. $C_3H_6O \xrightarrow[\Delta]{OH^-}$ Mesityl oxide .

The C_3H_6O is



Answer: B

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245. 3-hydroxy 2-methyl pentanal is formed when X react with Y in dilute Z solution. What are X,Y,Z

- A. $\begin{array}{ccc} X & Y & Z \\ CH_3 - CHO & CH_3 - CHO & NaOH \end{array}$
- B. $\begin{array}{ccc} X & Y & Z \\ C_2H_5 - CHO & CH_3 - CHO & NaOH \end{array}$
- C. $\begin{array}{ccc} X & Y & Z \\ C_2H_5 - CHO & C_2H_5 - CHO & NaOH \end{array}$
- D. $\begin{array}{ccc} X & Y & Z \\ C_2H_5 - CHO & C_2H_5 - CHO & NaCl \end{array}$

Answer: C

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246. A base can abstract an α - H atom from

- A. $CH_2 = CH_2$
- B. $CH \equiv CH$
- C. $CH_3 - CHO$
- D. $C_6H_5 - CHO$

Answer: C



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247. Which of the following pathways produces 2- pentanone

- (1) pent-1- yne is treated with $H_2SO_4 + HgSO_4$ and water
- (2) 3- methylhex -2- ene is treated with O_3 followed by hydrolysis
- (3) n - butyl megnesium halide is reacted with formaldehyde
- (4) hydroboration oxidation of pent -1- ene

A. 1, 3

B. 1, 2

C. 2, 4

D. 1, 3, 4

Answer: B



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248. Which statement is correct with ethanal and propanone

- (1) Both react with $NaHSO_3$
- (2) Both gives iodoform test
- (3) Both can be reduced into alcohols
- (4) Both undergoes aldol condensation

A. 1, 3

B. 2, 3

C. 2, 4

D. all of these

Answer: D



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249. Which of following react same manner with $H - CHO$ and $C_6H_5 - CHO$?

A. Fehling's solution

B. $CH_3 - MgX$

C. NH_3

D. dil . $NaOH$

Answer: B



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250. Acetone gives addition elimination reaction with

(1) $NH_2 - OH$ (2) $NH_2 - CONH - NH_2$

(3) $NaHSO_3$ (4) $CH_3 - NH_2$

A. 2, 4

B. 3, 4

C. 1, 2, 4

D. 1, 2, 3

Answer: C



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251. An carbonyl compounds gives nucleophilic addition reaction with

- (1) HCN (2) $NaSHO_3$
(3) $R - MgX$ (4) $NH_2 - NH_2$

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

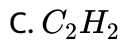
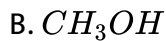
Answer: D



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252. The product formed when $HCHO$ is heated with conc. KOH

- A. CH_3CHO

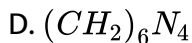
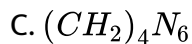
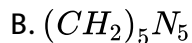
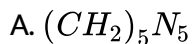


Answer: B



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253. Formaldehyde reacts with NH_3 to form urotropine which has the composition



Answer: D



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254. Pinacol is converted in to pinacolone by

- A. rearrangement
- B. oxidation
- C. reduction
- D. hydrolysis

Answer: A



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255. Aldehydes with Tollen's reagent are

- A. reducing agent
- B. oxidising agents
- C. hydrating agents
- D. bleaching agents

Answer: A

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256. Low reactivity of ketones with respect to aldehydes is due to

- A. greater + I effect of alkyl group
- B. greater steric hindrance of alkyl group
- C. both 'a' and 'b'
- D. less steric hindrance of alkyl group

Answer: C

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257. Aldehydes can be distinguished from ketones by using

- A. dil . NaOH

B. R-MgX

C. Na_2CO_3

D. Schiff's reagent

Answer: D

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258. Which of the following are generally used for preparing derivatives of aldehydes and ketones ?

A. Hydrocyanic acid

B. Hydroxylamine

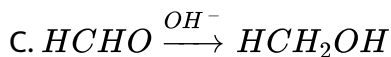
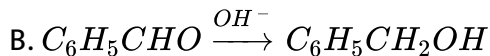
C. Phenyl hydrazine

D. All of these

Answer: D

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259. Which of the following is an example of aldol condensation ?

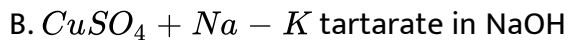


Answer: A



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260. Which of the following can be used to differentiate between acetaldehyde and propanal ?

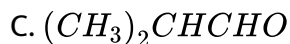
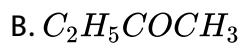
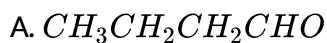


D. Decolourised Fuchin

Answer: C

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261. Molecular formula 'A' ($C_{94}H_8O$) reacts with CH_3MgI gives 3-methyl 2-butanol . The structure of A is



Answer: C

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262. When acetone reacts with $Ba(OH)_2$ it gives

- A. acetoxime
- B. urotropine
- C. t-butyl alcohol
- D. diacetone alcohol

Answer: D



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263. Which of the following aldehydes does not reduce Fehling solution readily ?

- A. Acetaldehyde
- B. Formaldehyde
- C. Propanal
- D. Benzaldehyde

Answer: D

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264. 1-propanol is obtained from C_2H_5MgI and what ?

A. CH_3CHO

B. $HCHO$

C. HCN

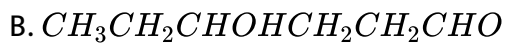
D. C_2H_5CHO

Answer: B

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265. Treatment of propionaldehyde with dil NaOH solution gives

A. $CH_3CH_2COOCH_2C_2H_5$



Answer: C

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266. Oxidation number of carbon in HCHO is ,

A. 0

B. 2

C. 3

D. 4

Answer: A

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267. Which of the following compounds do not undergo aldol condensation?

- A. Acetaldehyde
- B. Propanal
- C. Ethyl methyl ketone
- D. Benzaldehyde

Answer: D

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268. Which of the following would undergo aldol condensation?

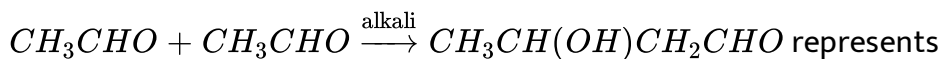
- A. CH_3CHO
- B. C_2H_5CHO
- C. CH_3COCH_3
- D. All

Answer: D



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269. The reaction ,



- A. Cannizzaro reaction
- B. Aldol condensation
- C. Wurtz reaction
- D. Mendius reaction

Answer: B



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270. Mesityl oxide is formed by the condensation of

A. acetaldehyde

B. acetone

C. propanal

D. formaldehyde

Answer: B

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271. The most probable compound whose molecular formula is C_3H_6O and which can give Tollen's reagent test

A. CH_3CH_2CHO

B. CH_3COCH_3

C. $CH_3OCH_2CH_3$

D. $CH_2 = CHCH_2OH$

Answer: A

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272. When two molecules of HCHO react in presence of base to produce CH_3OH and $HCOONa$, the reaction is called

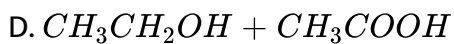
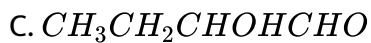
- A. Wurtz reaction
- B. Cannizzaro reaction
- C. Aldol condensation
- D. Hoffman reaction

Answer: B

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273. The aldol condensation of acetaldehyde results in the formation of :

- A. $CH_3COCHOHCH_3$
- B. $CH_3CHOHCH_2CHO$



Answer: B

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274. Which of the following reagents can not be used to distinguish between pentanal and 2-pentanone ?

A. I_2 in NaOH

B. Fehling solution

C. Na metal

D. Tollen's reagent

Answer: C

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275. Acetaldehyde reacts with NH_2OH to give

- A. acetal amine
- B. acetal oxide
- C. acetaldoxime
- D. amino acetal

Answer: C



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276. Which of the following statement true ?

- A. Aldehydes are less susceptible to oxidation than ketones
- B. All aldehydes undergo Cannizzaro reaction
- C. Aldehydes are more susceptible to oxidation than ketones
- D. Formaldehyde does not react with ammonia

Answer: C



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277. Silver mirror test is given by

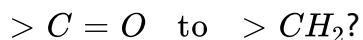
- A. aldehyde
- B. ketones
- C. amines
- D. ethers

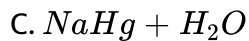
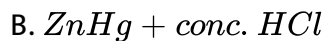
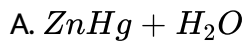
Answer: A



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278. Which of the following reagent is used to convert





Answer: B

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279. The formation of acetone sodium bisulphite from a acetone is an example of

A. electrophilic additon

B. nucleophilic addition

C. nucleophilic substitution

D. electrophilic substitution

Answer: B

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280. In which reaction new C- C bond does not form

- A. Aldol
- B. Cannizzaro's
- C. Wurtz
- D. $\text{HCN} + \text{RMgX}$

Answer: B

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281. Mesityl oxide is

- A. ketone
- B. aldehyde
- C. ester

D. ethers

Answer: A

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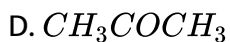
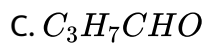
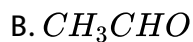
282. Schiff's reagent is obtained by passing

- A. SO_2 gas in aq. Solution of rosaniline
- B. NO_2 gas in aq. Solution of rosaniline
- C. O_2 gas in aq. Solution of rosaniline
- D. CO_2 gas in aq. Sol. of rosaniline

Answer: A

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283. Which of the following can reduce Tollen's reagent but not Fehling solution ?



Answer: A



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284. An aldehyde on oxidation gives

A. an alcohol

B. an acid

C. an ether

D. a ketone

Answer: B



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285. Magenta is

- A. alc. phenolphthalein
- B. p-rosaniline hydrochloride
- C. methyl red
- D. red litmus

Answer: B



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286. Aldehyde on reaction with Grignard reagent and subsequent hydrolysis yields

- A. primary alcohol
- B. tertiary alcohol
- C. secondary alcohol
- D. dihydroxy alcohol

Answer: C

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287. Which of the following does not have alpha hydrogen ?

- A. Formaldehyde
- B. Acetadehyde
- C. Dimethyl acetaldehyde
- D. Acetone

Answer: A

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288. Rochelle salt is

- A. ammonium tartarate
- B. sodium ammonium tartarate
- C. potassium ammonium tartarate
- D. sodium tartarate

Answer: B



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289. Fuschin is ,

- A. pink dye of para - rosa - aniline hydrochloride
- B. Schiff's reagent
- C. Tollen's reagent

D. Fehling solution

Answer: A



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290. Which of the following is a gas at room temperature ?

A. CH_3CHO

B. $HCHO$

C. CH_3COCH_3

D. $C_2H_5OC_2H_5$

Answer: B



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291. Clemmenson reduction is carried out with

A. H_2 / Pd

B. NH_2, NH_2 , followed by treatment with glycolic KOH

C. $LiAlH_4$ in ether

D. $Zn \frac{Hg}{H} Cl$

Answer: D

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292. Aldehydes having no α - hydrogen atom undergo

A. Hoffman reaction

B. Aldol condensation

C. Cannizzaro reaction

D. Wurtz reaction

Answer: C

 [View Text Solution](#)

293. Which of the following does not react with phenyl hydrazine ?

A. Ethanol

B. Ethanal

C. Acetone

D. 2- pentanone

Answer: A



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294. Which of the following compound does not undergo Cannizzaro reaction ?

A. Ethanol

B. Methanal

C. Benzaldehyde

D. 2,2,4,4- tetra methyl 3- pentanone

Answer: A



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295. Reduction in presence of amalgamated zinc and conc. HCl is known as

- A. Mendius reduction
- B. Wurtz reaction
- C. Hoffmanns reaction
- D. Clemmenson's reduction

Answer: D



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296. Aldehyde having no α - hydrogen undergo disproportionation in presence of strong potash to give a corresponding salt of acid and alcohol .

The reaction is known as ,

- A. Wurtz reaction
- B. Aldol condensation
- C. Cannizzaro's reaction
- D. Esterification

Answer: C

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297. An organic compound contains H_2O and single carbon. It responds positive to Tollens' reagent .

The compound is

A. HCHO

B. CH_3OH

C. CH_3CHO

D. none of these

Answer: A

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298. Formaldehyde gives an addition product with methyl magnesium iodide which on acid hydrolysis gives

A. CH_3OH

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

C. $(\text{CH}_3)_2\text{CHOH}$

D. $\text{CH}_3\text{CHOHCH}_3$

Answer: B

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299. Formaldehyde and formic acid are distinguished by treating with

A. Tollen's reagent

B. $NaHCO_3$

C. Fehling solution

D. Schiff's reagent

Answer: B

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300. Pick up the correct statements from the following

A. both aldehydes and ketones use sp^2 - hybrid carbon atoms for their addition reaction

B. acetic acid neither reacts with Fehling's solution nor with Tollen's reagent

C. chloral is aldehyde

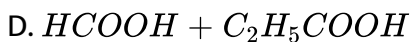
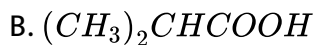
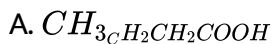
D. all are correct

Answer: D

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301. Butanal is heated with ammonical silver nitrate.

The product formed is ,



Answer: A

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302. Fehling solution is

- A. acidified $CuSO_4$ solution
- B. ammonical $AgNO_3$ solution
- C. copper sulphate, sodium hydroxide and Rochelle salt
- D. none of these

Answer: C

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303. Union of two or more molecules of the same or different compound with elimination of water to form a new substance is known as

- A. synthesis
- B. polymerisation

C. condensation

D. none of these

Answer: C

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304. Which of the following compound will undergo self - aldol condensation in the presence of cold dilute alkali?

A. C_6H_5CHO

B. $(CH_3)_3CCHO$

C. C_2H_5CHO

D. CCl_3CHO

Answer: C

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305. When a ketone is condensed into an ketol, the reagent used is

- A. Na_2CO_3
- B. $NaHCO_3$
- C. Br_2 water
- D. Cl_2

Answer: A



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306. Benzaldehyde undergoes auto-oxidation and reduction in presence of

- A. conc. NaOH
- B. Na_2CO_3
- C. $NaHCO_3$
- D. dil. NaOH

Answer: A



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307. Nucleophilic attack on carbonyl carbon changed its hybridisation from

A. sp to sp^2

B. sp^2 to sp^3

C. sp^3 to sp^2

D. sp to sp^3

Answer: B



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308. Which of the following reaction is used for detecting the presence of carbonyl group in aldehydes and ketones ?

- A. Reaction with hydroxylamine
- B. Reaction with phenyl hydrazine
- C. Reaction with hydrazine
- D. All of these

Answer: D

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309. Which of the following reagent form oxime with carbonyl compound ?

- A. NH_3OH
- B. NH_2OH
- C. $NaOH$
- D. CH_2N_2

Answer: B

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310. Ketonic form of acetone contains,

- A. 8 σ bond and 2 π bonds
- B. 9 σ bonds and 1 π bond
- C. 7 σ bonds and 3 π bonds
- D. 4 σ bonds and 5 π bonds

Answer: B

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311. β - hydroxy butyraldehyde is an example of

- A. aldol
- B. ketol
- C. ester

D. alcohol

Answer: A



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312. Which is most difficult to oxidise ?

A. HCHO

B. CH_3COCH_3

C. CH_3CHO

D. C_2H_5CHO

Answer: B



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313. Aldehydes or ketones having at least one α -hydrogen undergo condensation reaction in presence of dilute base. This reaction is called

- A. Aldol condensation
- B. Cannizzaro's reaction
- C. Hoffmann's reaction
- D. Mendius reaction

Answer: A



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314. The reagent with which both aldehyde and acetone react easily is

- A. Fehling's reagent
- B. Grignard reagent
- C. Schiff's reagent
- D. Tollen's reagent

Answer: B



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315. When, acetaldehyde is heated with Tollen's reagent, following is obtained

- A. Methyl alcohol
- B. Silver acetate
- C. Silver mirror
- D. Formaldehyde

Answer: C



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316. Which of the following compounds would undergo Cannizzaro's reaction

A. Propionaldehyde

B. Benzaldehyde

C. Bromobenzene

D. Acetaldehyde

Answer: B

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317. Schiff's reagent gives pink colour with :

A. Aldehydes

B. Ethers

C. Ketones

D. Carboxylic acid

Answer: A

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318. An aldehyde on oxidation gives

- A. an alcohol
- B. an acid
- C. A ketone
- D. An ether

Answer: B



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319. Schiff's reagent is

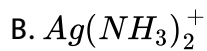
- A. Magneta solution decolorised with SO_2 .
- B. Ammonical cobalt chloride solution
- C. Ammonical manganese sulphate solution

D. Magneta solution decolourised with chlorine

Answer: A

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320. Acetone and acetaldehyde can be distinguished by



Answer: B

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321. Hexamethylene tetramine is used as

- A. analgesic
- B. antipyretic
- C. urinary antiseptic
- D. all the above

Answer: C

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322. Benzyl alcohol is obtained from benzaldehyde by

- A. Fittg's reaction
- B. Cannizaro's reaction
- C. Kolbe's reaction
- D. Wurtz's reaction

Answer: B

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323. Which of the following gives difference between aldehyde and ketone ?

- A. Fehling solution
- B. Tollen's reagent
- C. Schiff's reagent
- D. all of the above

Answer: D



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324. Formaldehyde gives an additive product with Methylmagnesium iodide which in aqueous hydrolysis gives

- A. isopropyl alcohol
- B. Ethyl alcohol

C. methyl alcohol

D. n- propyl alcohol

Answer: D

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325. The reagent which easily reacts with ethanol and propanol is

A. Fehling solution

B. Grignard reagent

C. Schiff's reagent

D. Tolen's reagent

Answer: B

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326. Magneta is

- A. alkaline phenolphthalein
- B. methyl red
- C. p-rosaniline hydrochloride
- D. red litmus

Answer: C



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327. Grignard reagent on reaction with ketones forms

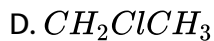
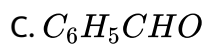
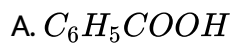
- A. tertiary alcohol
- B. Secondary alcohol
- C. acetic acid
- D. Acetaldehyde

Answer: A



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328. The compound which reacts with Fehling solution is



Answer: B



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329. Acetone gives test with

A. Phenyl hydrazine

B. Fehling solution

C. Schiff's reagent

D. all the above

Answer: A

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330. An aldehyde can undergo the aldol condensation having

A. an aromatic ring

B. no alpha H atom

C. atleast one α -H atom

D. at least one β -H atom

Answer: C

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331. An organic compound 'X' having molecular formula $C_5H_{10}O$ yield phenylhydrazone and gives negative response to the iodoform test and Tollens test . It produces n-pentane on reduction. 'X' could be

- A. pentanal
- B. 2-pentanone
- C. 3- pentanone
- D. n-amyl alcohol

Answer: C

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332. Aldol condensation will not take place in

- A. HCHO
- B. CH_3CHO
- C. CH_3COCH_3

D. CH_3CH_2CHO

Answer: A

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333. CH_3COCH_3 can be converted to $CH_3CH_2CH_3$ by the action of

A. HIO_3

B. $ZnHg + HCl$

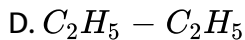
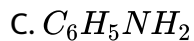
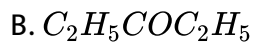
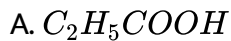
C. NHO_3

D. H_3PO_3

Answer: B

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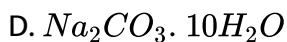
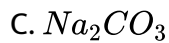
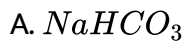
334. The compound most suitable for the preparation of cyanohydrin is



Answer: B

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335. The composition of common baking powder is



Answer: A

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336. Which one of the following undergoes reaction with 50 % sodium hydroxide solution to give the corresponding alcohol and acid?

- A. Butanal
- B. Formaldehyde
- C. Phenol
- D. Benzoic acid

Answer: B



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337. Which of the following compounds can be regenerated to carbonyl compounds ?

- A. Urotropin
- B. Bisulphite complex

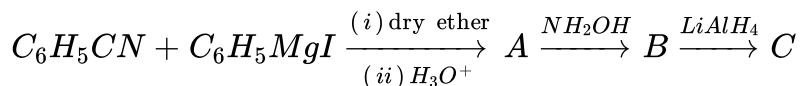
C. Cynohydrine

D. Diacetone amine

Answer: B

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338. What is 'C' in the following reaction ?



A. diphenyl methane

B. diphenyl methanamine

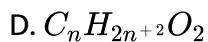
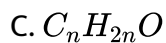
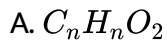
C. nitrodiphenyl methane

D. diphenyl

Answer: B

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1. General formula for carboxylic acid is



Answer: B



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2. The general formula of an ester, where R represents an alkyl group, is



D. ROR

Answer: C



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3. Vinegar contains acetic acid nearly

A. 6 – 10 %

B. 30 %

C. 12 – 15 %

D. 20 %

Answer: A



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4. The bite of honey - bee inject into our body

- A. acetic acid
- B. formic acid
- C. butyric acid
- D. carbolic acid

Answer: B

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5. Glacial acetic acid at low temperature is a

- A. thin liquid
- B. viscous liquid
- C. ice like solid
- D. semi solid

Answer: C

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6. The suffix used in carboxylic acid is

A. *-oic*

B. *-a ≠*

C. *ene*

D. *-al*

Answer: A



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7. Formic acid owes its origin to

A. milk

B. butter

C. red ants

D. vinegar

Answer: C

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8. Vinegar obtained from canesugar contains

- A. Citric acid
- B. Lactic acid
- C. Acetic acid
- D. Palmitic acid

Answer: C

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9. Write the *IUPAC* name of CH_3CH_2COOH

A. ethylformic acid

B. ethanemethanoic acid

C. propanoic acid

D. propanoic acid

Answer: D

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10. IUPAC name m-toluic acid is

A. 3-methylbenzoic acid

B. 2-methylbenzoic acid

C. 4-methylbenzoic acid

D. 2,4 - dimethylbenzoic acid

Answer: A

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11. IUPAC name of carboxylic acid is

- A. alkinoic acid
- B. alkanoic acid
- C. alkenoic acid
- D. alkyl alkanoate

Answer: B



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12. I.U.P.A.C name of ester is

- A. alkoxy alkane
- B. alkoxy alkene
- C. alkane alkanoate

D. alkyl alkanoate

Answer: D

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13. IUPAC name of isobutyric acid is

- A. 3- methylpropionic acid
- B. 2- methylpropanoic acid
- C. 3- methylbutanoic acid
- D. isobutanoic acid

Answer: B

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14. IUPAC name of following compound is $(CH_3)_2CHOOC_2H_5$

- A. ethylisobutanoate
- B. ethylisobutyrate
- C. ethyl - 2 - methylpropanoate
- D. ethyl -1- methylethanoate

Answer: C

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15. IUPAC name of following compound is $(CH_3)_3C - CH_2 - COOH$

- A. 2,2-dimethylbutanoic acid
- B. 3,3-dimethylbutanoic acid
- C. 2, 3- dimethylpropanoic acid
- D. 2, 3- dimethylbutanoic acid

Answer: B

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16. IUPAC name of following compound is $C_2H_5 - COOCH(CH_3)_2$

- A. isopropylpropanoate
- B. isopropylpropionate
- C. 2-propylpropanoate
- D. 2-propylethanoate

Answer: C



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17. Structure of ethyl ethanoate is

- A. $CH_3COOC_2H_5$
- B. $C_2H_5COOCH_3$
- C. $H - COOC_2H_5$

D. $H - COOCH_3$

Answer: A



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18. An organic compound having the molecular formula $C_2H_4O_2$ is

A. formic acid

B. acetic acid

C. ethyl acetate

D. propionic acid

Answer: B



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19. Aliphatic carboxylic acids shows isomer of type,

- A. position
- B. chain
- C. functional
- D. all of these

Answer: B

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20. Carboxylic acid is isomeric with

- A. aldehydes
- B. alcohols
- C. esters
- D. saturated ketones

Answer: C

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21. Acids and esters are

- A. chain isomers
- B. position isomers
- C. functional isomers
- D. metamers

Answer: C



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22. Molecular formula $C_2H_4O_2$ represents

- A. acids
- B. esters
- C. aldehydes

D. both 'a' and 'b'

Answer: D

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23. Molecular formula $C_2H_4O_2$ shows

- A. chain isomerism
- B. position isomerism
- C. functional isomerism
- D. metamerism

Answer: C

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24. How many carboxylic acids are possible for $C_4H_8O_2$?

A. 2

B. 3

C. 4

D. 5

Answer: A

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25. Total number of isomeric acids can be calculate by formula

A. $I = 2^{n-1}$

B. $I = 2^{n-3}$

C. $I = 2^n$

D. $I = 2^{n-2} - 1$

Answer: B

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26. Citric acid is

- A. monocarboxylic acid
- B. dicarboxylic acid
- C. tricarboxylic acid
- D. fatty acid

Answer: C



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27. The acid which is obtained from plant

- A. propionic acid
- B. valeric acid
- C. fumaric acid

D. malic acid

Answer: B



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28. Lemon is sour due to

A. oxalic acid

B. tartaric acid

C. citric acid

D. malic acid

Answer: C



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29. Saturated monocarboxylic acid is second oxidative product of

A. 1° alcohol

B. 2° alcohol

C. both a & b

D. ketones

Answer: C

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30. Monocarboxylic acid shows functional isomerism with

(1) Ester (2) aldehydes

(3) ketones (4) ethers

A. 1, 2

B. 1

C. 2, 3

D. 3, 4

Answer: B



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31. IUPAC name of malic acid is

- A. 3-hydroxybutanoicacid
- B. 2-hydroxybutanedioicacid
- C. 2- hydroxybutanoicacid
- D. 2-hydroxypentanedioicacid

Answer: B



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32. IUPAC name of β - methyl butyric acid is

- A. 3-methylbutanoicacid

B. 4- methylpentanoicacid

C. 2-methylbutanoicacid

D. 2-methylpropanoicacid

Answer: A

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33. The IUPAC name of caproic acid is

A. pentanoic acid

B. 2- phenylethanoicacid

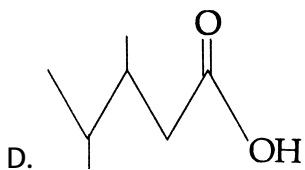
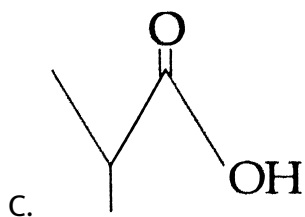
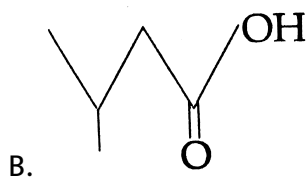
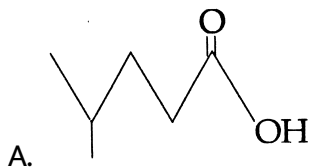
C. 2- phenylpropanoicacid

D. hexanoicacid

Answer: D

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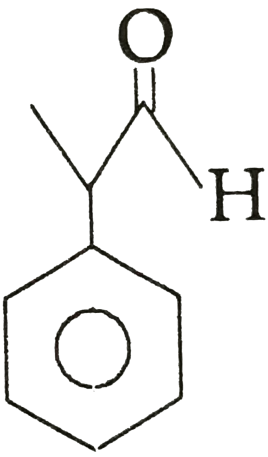
34. Which of the following is isobutyric acid



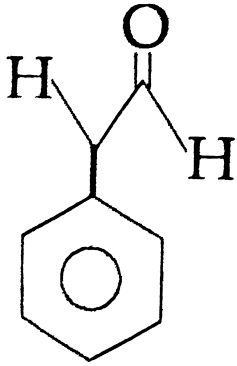
Answer: C

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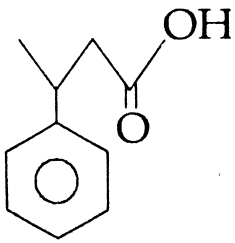
35. Which of the following is 2-phenylpentanoic acid ?



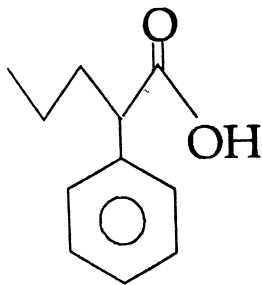
A.



B.



C.



D.

Answer: D

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36. n-valeric acid is functional isomer of

A. methyl propionate

B. n-butyl formate

C. propyl isobutyrate

D. ethyl isobutyrate

Answer: B

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37. Butyric acid and isobutyric acid are

- A. chain isomers
- B. position isomers
- C. metamers
- D. tautomers

Answer: A



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38. Which isomers of $C_5H_{10}O_2$ shows optical isomerism ?

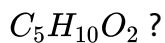
- A. 2- methylbutanoicacid
- B. valeric acid
- C. neo-valeric acid
- D. 3- methylbutanoicacid

Answer: A



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39. How many carboxylic acids are possible for molecular formula



A. 3

B. 4

C. 5

D. 6

Answer: B



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40. Molecular formula $C_4H_8O_2$ shows

(1) chain isomerism (2) metamerism

(3) functional isomerism (4) optical isomerism

A. 1, 2, 3

B. 3, 4

C. 2, 3, 4

D. all of these

Answer: A



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41. IUPAC name of malonic acid is

A. propanedioicacid

B. ethanedioicacid

C. butanedioicacid

D. pentanedioicacid

Answer: A



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42. Carbon atom in carboxyl group is

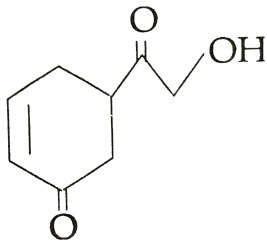
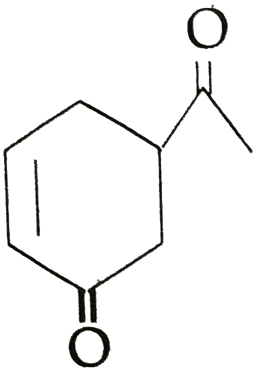
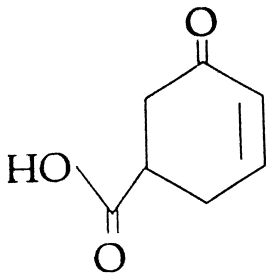
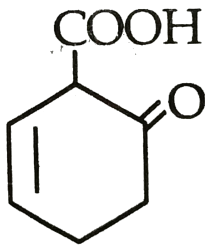
- A. sp -hybridised state
- B. sp^2 - hybridised state
- C. sp^3 - hybridised state
- D. sp^3 -d- hybridised state

Answer: B



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43. Which of the following is 3- oxo cyclohex - 4- ene -1- carboxylic acid



Answer: B



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44. Which of the following is not fatty acid ?

- A. propionic acid
- B. butyric acid
- C. iso-butyric acid
- D. iso - phthalic acid

Answer: D



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45. Carboxylic acid donot give characteristic property of

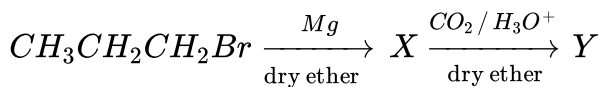
- A. R - group
- B. $-COOH$ group
- C. $>C=O$ group

D. $-O-H$ group

Answer: C

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46. Consider the following sequence of reactions and identify the final product (Y)



- A. CH_3CH_2COOH
- B. $(CH_3)_2CHCOOH$
- C. $CH_3CH_2CH_2CH_2COOH$
- D. $CH_3CH_2CH_2COOH$

Answer: D

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47. Solid carbondioxide and RMgX produces

- A. alkanolic acid
- B. alkanal
- C. alkanone
- D. alkyl alkanoate

Answer: A



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48. Carbonation of CH_3MgI gives an organic compound. This compound is also obtained by

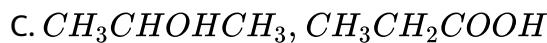
- A. hydrolysis of acetonitrile by a mineral acid
- B. oxidation of methyl alcohol
- C. hydrolysis of isoacetonitrile by a mineral acid
- D. hydrolysis of methyl formate with dilute mineral acid

Answer: A



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49. Propyl propionate is prepared from which of the following



Answer: A



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50. A mixture of carboxylic acid (A) and alcohol (B) on heating give and ester (C) having molecular mass 74. What is (C) ?



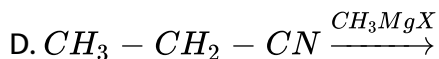
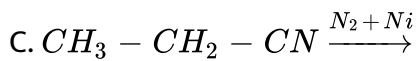
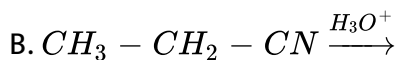
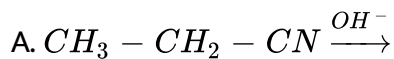
C. Both a and b

D. None of these

Answer: C

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51. $CH_3 - CH_2 - COOH$ is can be obtained in the following synthesis



Answer: B

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52. $CH_3 - \overset{O}{\parallel} C - CH_3$ can be converted to $CH_3 - COOH$ by following method.



A. only 2

B. 1 and 2

C. 2 and 3

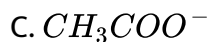
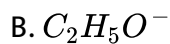
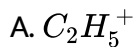
D. 1 and 3

Answer: B



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53. Which is leaving group in the hydrolysis of $CH_3COOC_2H_5$?



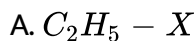
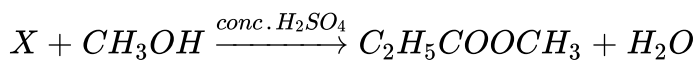
Answer: B

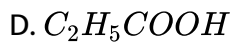
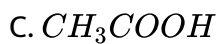
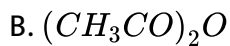
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54. For the preparation of isopropyl acetate from esterification. The compounds used as ,

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55. Find out X in the following reaction

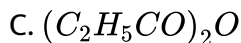
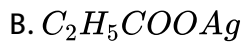
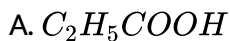




Answer: D

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56. Ethyl propionate is formed from ethyl iodide and what ?



D. All of these

Answer: B

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57. Propanoic acid is the oxidative product of ,

- A. ethanol
- B. 3- pentanone
- C. 1- butanol
- D. 2- propanol

Answer: B



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58. Reaction

$CH_3COOH + C_2H_5OH \rightarrow CH_3COOC_2H + H_2O$ is an illustration of

- A. dehydration
- B. esterification
- C. neutralization
- D. dehydrogenation

Answer: B

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59. $R - CH_2 - CH_2OH$ can be converted into RCH_2COOH . The reaction is

- A. reduction
- B. hydrolysis
- C. oxidation
- D. decarboxylation

Answer: C

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60. If hydrolysis of ester is carried out in presence of an acid, using water containing radioactive oxygen atom, the product most likely to be

radioactive is ,

- A. alcohol
- B. ester
- C. acid
- D. both 'a' and 'c'

Answer: C



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61. If acetic acid reacts with methyl alcohol containing labelled oxygen atom . In presence of dry HCl, the labelled oxygen atom, at the complete reaction will be found in

- A. methyl acetate
- B. water
- C. may be 'a' and 'b'

D. water

Answer: A

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62. Propionic acid is obtained from dry ice and what?

A. CH_3MgI

B. C_2H_5MgBr

C. C_3H_7MgBr

D. None of these

Answer: B

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63. Carbonation of Grignard reagent followed by hydrolysis gives

A. aldehyde

B. acid

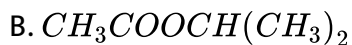
C. ketone

D. primary alcohol

Answer: B

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64. Which of one the esters is formed by esterification of propan -2- ol with acetic acid ?



Answer: B

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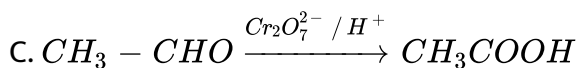
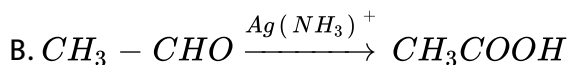
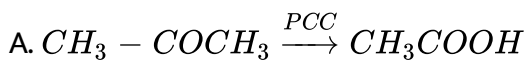
65. CH_3COCH_3 can be converted into CH_3COOH by

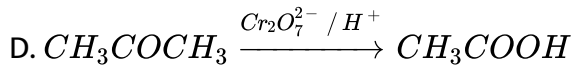
- A. reduction
- B. hydrolysis
- C. decarboxylation
- D. oxidation

Answer: D

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66. Which reaction does not have the correct oxidising agent ?

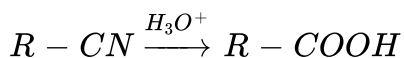




Answer: A

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67. For the following reaction



- A. there is protonation of electronegative nitrogen
- B. an amide is formed as an intermediate
- C. nitrogen atom is expelled as ammonia
- D. all are correct

Answer: D

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68. Acetylation is the introduction of

A. CH_3COOH group

B. $R - CO$ group

C. $CH_3CH_2O^-$

D. $CH_3 - CO$

Answer: D



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69. 2- methyl propane nitrile on acid hydrolysis give

A. butyric acid

B. isobutyric acid

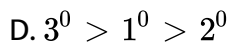
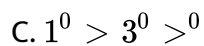
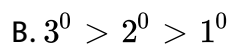
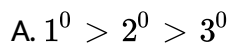
C. propionic acid

D. pentanoic acid

Answer: B

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70. In esterification reaction the correct order of reactivity of alcohol is ,



Answer: A

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71. Monocarboxylic acid are regarded as Oxidation product of aldehyde

- A. first
- B. second
- C. third
- D. fourth

Answer: A

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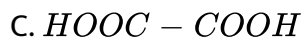
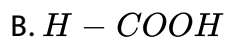
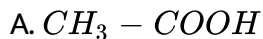
72. Formic acid is obtained when :

- A. Acetaldehyde is oxidised by acidic $KMnO_4$
- B. Calcium formate is heated with calcium acetate
- C. Methanol is oxidised by PCC
- D. Methanol is oxidised by acidic dichromate

Answer: D

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73. Which of the following acid containing aldehyde group ?



Answer: B



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74. Formic acid is not a representative member of the carboxylic acids

because:

A. it is first member of the series

B. it does not contain alkyl group

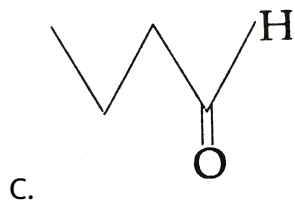
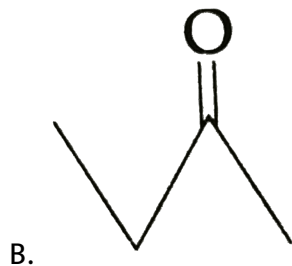
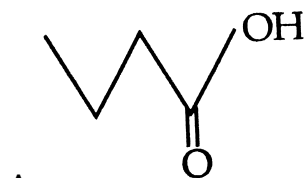
C. it is a gas

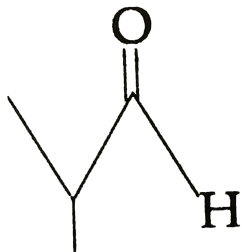
D. it reduced Tollen's reagent

Answer: B

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75. Molecular formula C_4H_8O oxidation gives acetic acid . The structure of $C_4H_8O_2$ will be



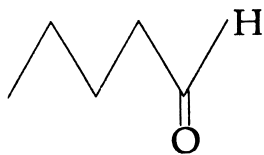


D.

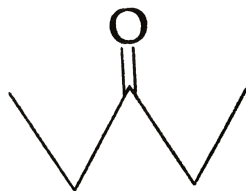
Answer: B

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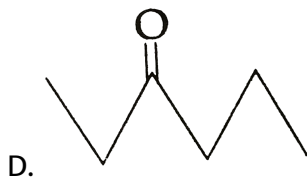
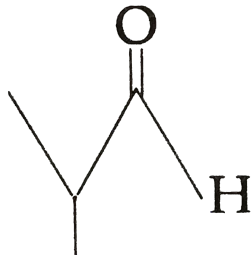
76. Mixture of acetic acid and propionic acid is obtained by oxidation of



A.



B.



Answer: B

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77. Isobutyric acid is obtained by oxidation of

- A. butanal
- B. 2-methyl propanal
- C. 2-methylpropen-1-ol
- D. both b and c

Answer: D



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78. 1-phenyl ethanone on oxidation gives

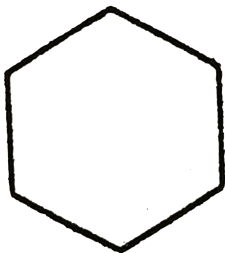
- A. salicylic acid
- B. benzoic acid
- C. succinic acid
- D. Phthalic acid

Answer: B

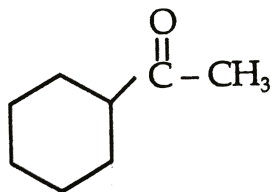


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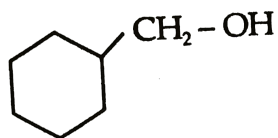
79. Cyclohexane carboxylic acid is obtained by oxidation of



A.



B.



C.

D. both b and c

Answer: D



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80. Benzoic acid is obtained by oxidation of

(1) benzaldehyde

(2)benzyl alcohol

(3) Acetophenone

A. only 1

B. 2,3

C. 1, 3

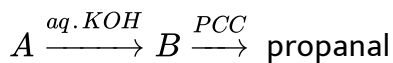
D. 1, 2, 3

Answer: D



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81. Find out A in the following reaction



A. n- propyl alcohol

B. n-propyl halide

C. n- propyl amine

D. diethyl ether

Answer: B



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82. Acid hydrolysis of cyanide may produces

A. carboxylic acid

B. mineral acid

C. aldehyde

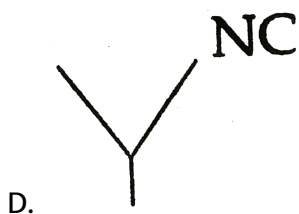
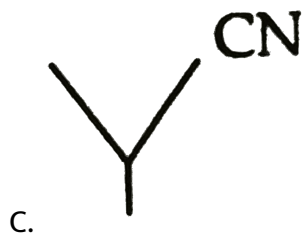
D. amine

Answer: A



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83. Molecular formula C_4H_7N on acid hydrolysis gives 2- methyl propanoic acid . The possible structure of C_4H_7N will be



Answer: C

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84. Benzoic acid is obtained by acid hydrolysis of

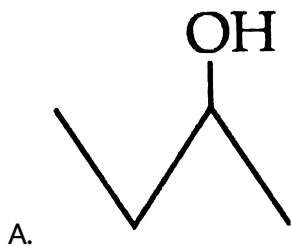
- A. benzonitrile
- B. 2- phenylethanenitrile
- C. phenyl isocyanide
- D. 2-phenylethaneisonitrile

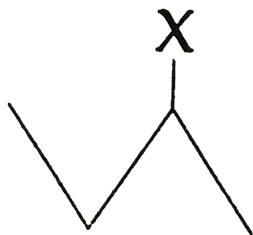
Answer: A

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85. Compound A on hydrohalogenation gives B, which is treated with alc. KCN and followed by acid hydrolysis gives 2- methyl butanoic acid.

The compound A will be





Answer: C

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86. Hexane dioic acid is obtained by oxidation of

A. benzene

B. cyclohexane

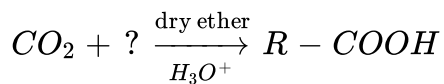
C. cyclohexene

D. cyclohexane carbaldehyde

Answer: C

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87. Find out missing compound in following reaction



A. $R - X$

B. $R - Li$

C. $R - MgX$

D. $R - ONa$

Answer: C

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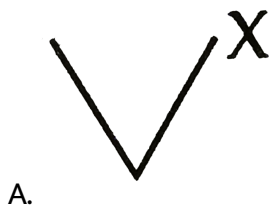
88. Dry ice and benzyl magnesium halide produces

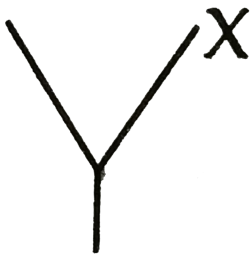
- A. benzoic acid
- B. phthalic acid
- C. 2-phenylethanoic acid
- D. 2- phenylpropanoic acid

Answer: C

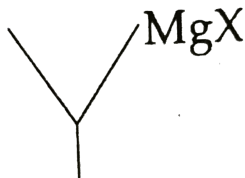
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89. 2-methyl propanoic acid is obtained from dry ice and what

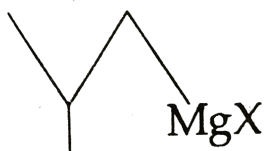




B.



C.



D.

Answer: C

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90. Hydrolysis acyl halide gives

A. aldehydes

B. ketones

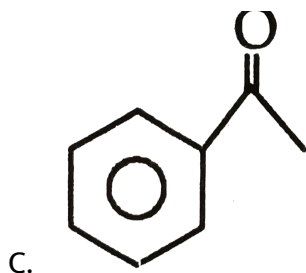
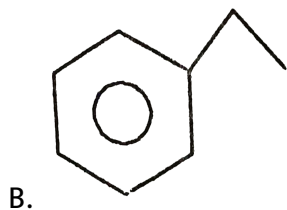
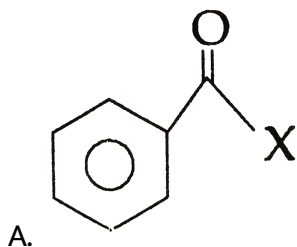
C. carboxylic acids

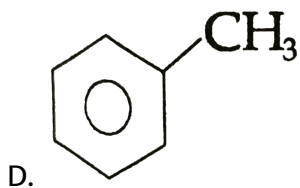
D. esters

Answer: C

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91. Benzoic acid is obtained by hydrolysis of





Answer: A

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92. 1 - phenyl ethanoyl chloride on hydrolysis gives

- A. ethanoic acid
- B. 1- phenylethanoic acid
- C. 2- phenylethanoic acid
- D. benzoic acid

Answer: C

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93. Hydrolysis of acid anhydride gives

- A. aldehydes
- B. ketones
- C. acid amides
- D. carboxylic acid

Answer: D



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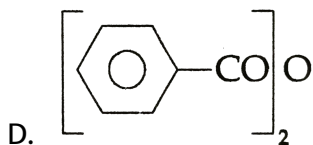
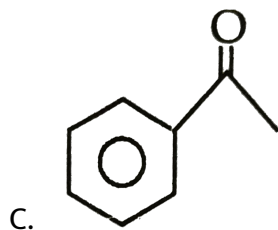
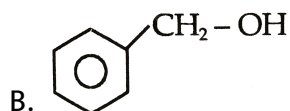
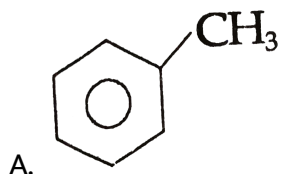
94. Hydrolysis of ethanoic anhydride gives

- A. methanoic acid
- B. propanoic acid
- C. ethanoic acid
- D. oxalic acid

Answer: C

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95. Which of the following compound does not gives benzoic acid on oxidation



Answer: D

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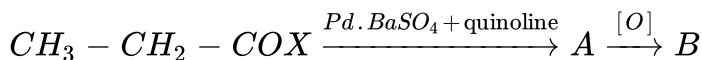
96. Benzoic acetic anhydride on hydrolysis gives

- A. benzoic acid
- B. acetic acid
- C. mixture of benzoic acid and acetic acid
- D. denzyl alcohol and acetic acid

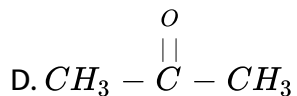
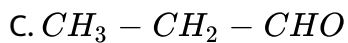
Answer: C

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97. Product 'B' in the following reaction



- A. $CH_3 - CH_2 - COOH$
- B. $CH_3 - COOH$



Answer: A

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98. Acid hydrolysis of ester produces

A. carboxylic acid

B. alcohol

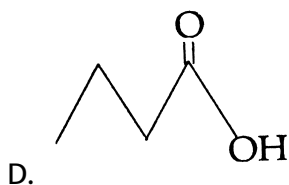
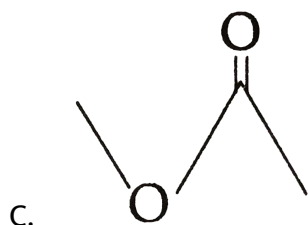
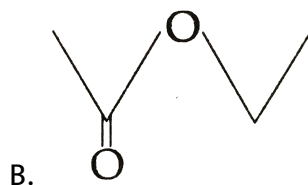
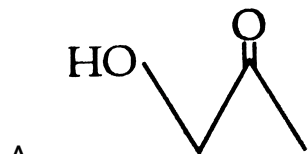
C. carboxylic acid and alcohol

D. aldehyde and ketone

Answer: C

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99. Molecular formula $C_4H_8O_2$ on acid hydrolysis gives acetic acid and ethanol. The structures of $C_4H_8O_2$ will be

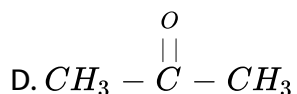
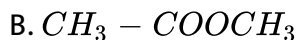


Answer: B



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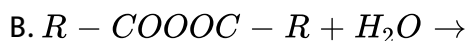
100. Molecular formula $C_3H_6O_2$ on acid hydrolysis gives A and B. The compound 'A' reduce Tollens reagent. The possible structure of $C_3H_6O_2$ will be

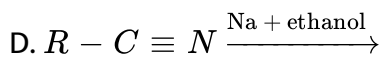
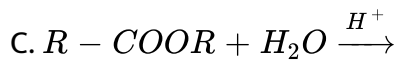


Answer: C

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101. Which of the following method cannot be used in the preparation of acid



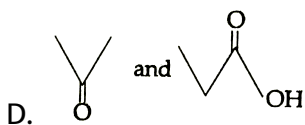
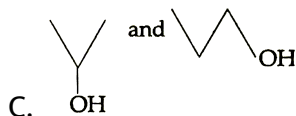
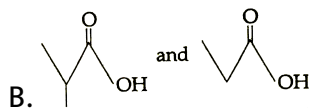
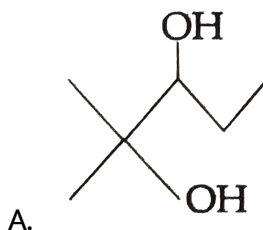


Answer: D

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102. On vigorous oxidation by permanganate solution,

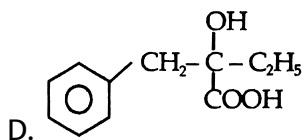
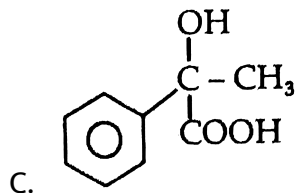
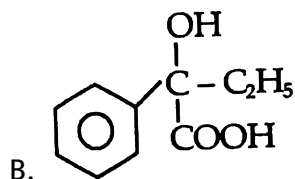
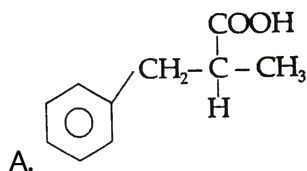
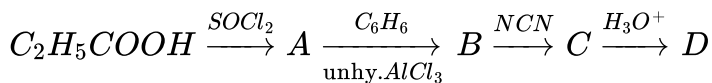
$(CH_3)_2C = CH - CH_2CH_3$ gives :



Answer: D

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103. A set of reaction yielded a product D.



Answer: B



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104. Alkyl benzene on oxidation by alkaline $KmnO_4$ gives

- A. aldehyde
- B. ketone
- C. carboxylic acid
- D. esters

Answer: C



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105. o- xylene on oxidation gives

- A. phthalic acid
- B. isophthalic acid
- C. terephthalic acid

D. citric acid

Answer: A



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106. Phenyl ethane on oxidation produces

A. phthalic acid

B. p - ethenyl benzoic acid

C. benzoic acid

D. salicylic acid

Answer: C



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107. Potassium salt of isophthalic acid on acid hydrolysis gives

- A. phthalic acid
- B. isophthalic acid
- C. terephthalic acid
- D. benzoic acid

Answer: B

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108. Carbonation of organometallic reagent

- A. is a one carbon homologation
- B. involves its carbanionic attacks on electron deficient carbonyl carbon
- C. both are correct
- D. none is correct

Answer: C



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109. Hydrolysis of nitriles with alkaline solution gives

A. salt of acid

B. amides

C. acid

D. esters

Answer: A



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110. The mechanism carbonation of organometallic compound is analogous to that of addition to

A. aldehyde and ketones

B. nitriles

C. alcohols

D. amines

Answer: A



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111. Dry ice reacts with n-propyl magnesium iodide to give

A. propyl acetic acid

B. propionic acid

C. butanoic acid

D. none of these

Answer: C



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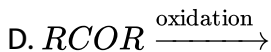
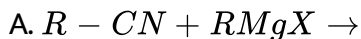
112. Esterification reaction is

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

Answer: A

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113. In which case $R - COOH$ is not product ?



Answer: A



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114. In esterification reaction concentrated H_2SO_4 act as

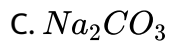
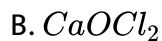
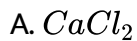
- A. dehydrating agent
- B. catalyst
- C. reducing agent
- D. oxidising agent

Answer: A



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115. After completion of esterification, excess of alcohol is removed by using



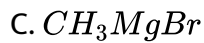
Answer: A

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116. Synthesis of ester involves the reaction of alcohol with

A. a ketone

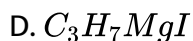
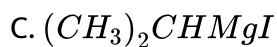
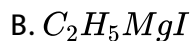
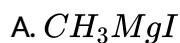
B. an amide



Answer: D

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117. Which of the following reagent produces 2- methyl propanoic acid with dry ice ?



Answer: C



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118. 1- propanol on oxidation give

A. propanal

B. propionic acid

C. propanone

D. ethanal

Answer: B



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119. $-CN$ group is converted into $-COOH$ group by ,

A. hydrolysis

B. oxidation

C. reduction

D. esterification

Answer: A



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120. Esters are formed from acid by the replacement of

A. non-ionisable H atom by alkyl group

B. ionisable H atom by alkyl group

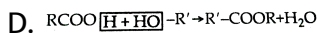
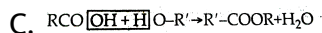
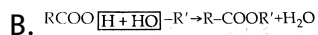
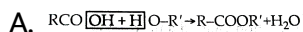
C. OH group by RO group

D. both 'b' and 'c'

Answer: C

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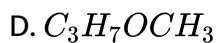
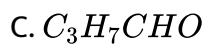
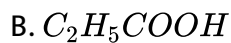
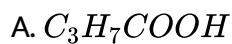
121. Which one of the following correctly represents esterification reaction



Answer: A

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122. The compound formed when propyl magnesium bromide is treated with carbon dioxide is



Answer: A

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123. The alkyl cyanides when hydrolysed to the corresponding acid, the gas evolved is



B. O_2

C. NH_3

D. CO_2

Answer: C

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124. In esterification of an acid, the other reagent is

A. Alcohol

B. An aldehyde

C. Amine

D. Water

Answer: A

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125. When methyl cyanide is hydrolysed in presence of alkali and followed by treatment with HCl.

The product is

- A. Acetamide
- B. Methane
- C. Formic acid
- D. Acetic acid

Answer: D



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126. Which product is formed , when acetonitrile is hydrolysed partially with dil . HCl ?

- A. Acetic acid
- B. Acetamide

C. Methyl cyanide

D. Acetic anhydrides

Answer: B



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127. Carboxylic acid is formed by the hydrolysis of an addition compound formed by reaction of Grignard's reagent with

A. ethanal

B. methanal

C. carbon dioxide

D. methyl cyanide

Answer: C



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128. Which is formed , when benzonitrile is hydrolysed by dil. HCl ?

- A. Benzoic acid
- B. Benzaldehyde
- C. Benzamide
- D. Benzoic unhydride

Answer: A



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129. The acidic nature of carboxylic acid is due to

- A. high degree of ionisation of acid
- B. greater resonance stabilization of the acid
- C. greater resonance stabilization of its anion
- D. all of the above

Answer: C

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130. Acidic character of carboxylic acid with an molecular mass

A. sometime increases some time decreases

B. decreases

C. increases

D. none of the above

Answer: B

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131. Among the acid





The acidic strength follows the order

A. $3 < 2 < 1$

B. $3 = 2 < 1$

C. $1 < 2 < 3$

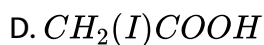
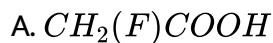
D. $1 < 2 = 3$

Answer: A



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132. Which of the following is the most stable acid ?

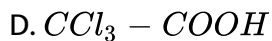
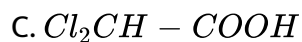
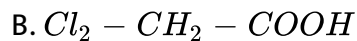
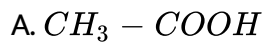


Answer: D



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133. Which of the following acid is strongest

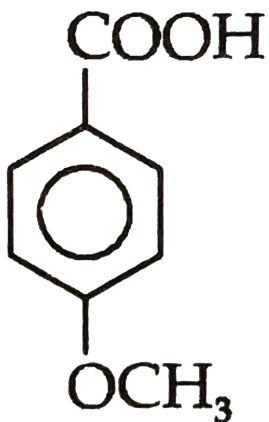


Answer: D

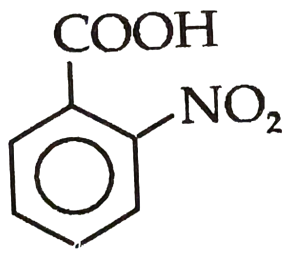


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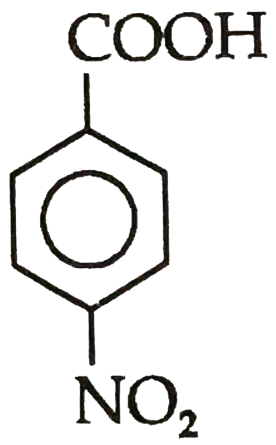
134. Which of the following is weak acid ?



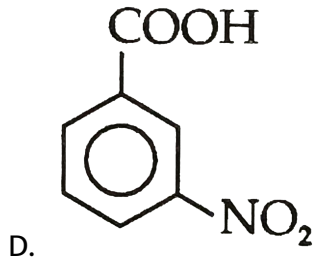
A.



B.



C.



Answer: A

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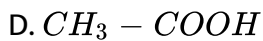
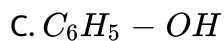
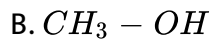
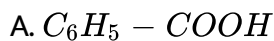
135. Which of the following is strongest acid ?

- A. $CH_3CH_2CH_2COOH$
- B. $CH_3CH_2CHBrCOOH$
- C. $CH_3CHBrCH_2COOH$
- D. CH_2BrCH_2COOH

Answer: B

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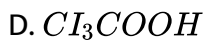
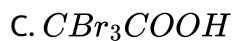
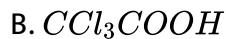
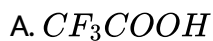
136. Which of the following has highest Pka value ?



Answer: B

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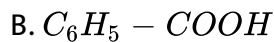
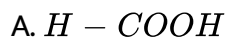
137. Which of the following is strong acid ?



Answer: A

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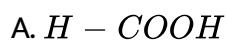
138. Which of the following is strongest acid ?

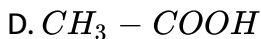
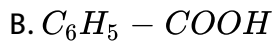


Answer: A

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139. Weakest among the following is





Answer: D

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140. Benzoic acid is more stronger than all aliphatic carboxylic except H - COOH , why ?

A. $C_6H_5 - XOOH$ is aromatic acid

B. In $C_6H_5 = COOH$, the $-COOH$ group is attached to sp^2 - hydridised atom

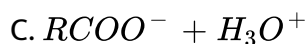
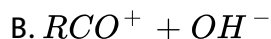
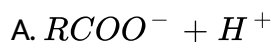
C. resonace stabilization of benzene ring

D. resonance stabilization of benzoate ion.

Answer: B

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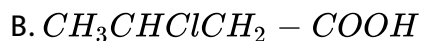
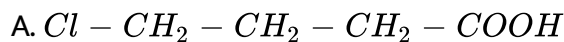
141. The aqueous solution of $RCOOH$ contains,

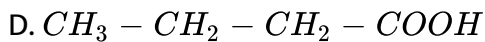
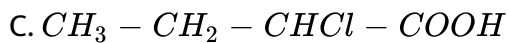


Answer: D

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142. Which one of the following would be expected to be most highly ionised in water





Answer: C

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143. Between CH_3COOH and $H - COOH$, the $HCOOH$ will be

A. less acidic

B. more acidic

C. equally acidic

D. non - acidic

Answer: B

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144. Formic and acetic acid may be distinguished by the reaction with

- A. sodium metal
- B. Tollen's reagent
- C. sodium ethoxide
- D. NaOH

Answer: B



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145. Which is tribasic acid

- A. adipic acid
- B. succinic acid
- C. Tartaric acid
- D. citric acid

Answer: D

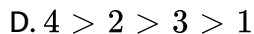
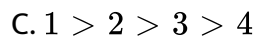
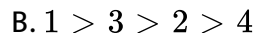
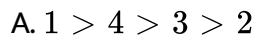


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146. Consider the following acids



The correct sequence of acidity is



Answer: D



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147. Which of the following order of relative strength of acid is correct ?

A.



B.



C.



D.

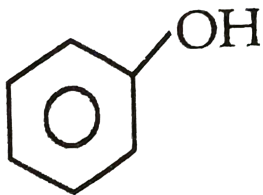


Answer: A

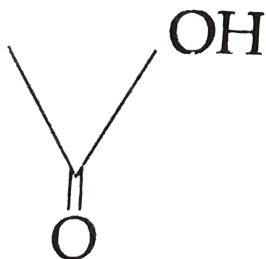


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148. Which of the following is weakest acid

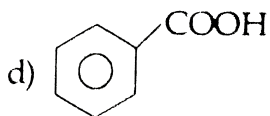


A.



B.

C. $H - COOH$



D.

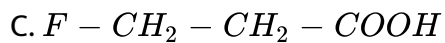
Answer: A

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149. Which of the following acid has smallest dissociation constant ?

A. $CH_3 - CHF COOH$

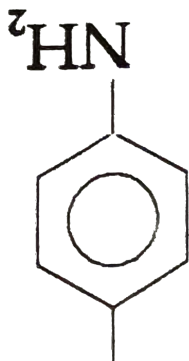
B. $BrCH_2CH_2 - COOH$



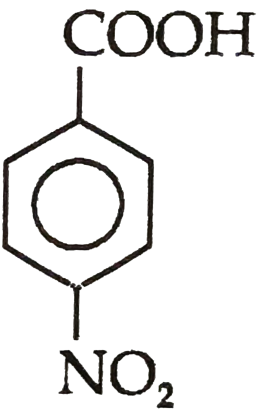
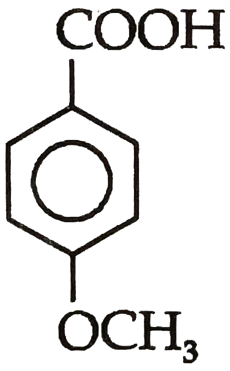
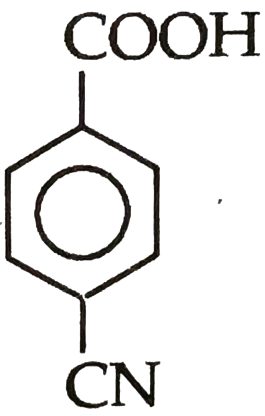
Answer: B

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150. Which among the following is strongest acid ?



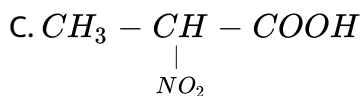
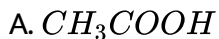
A. $HOOC$



Answer: D



151. Among the acid which have lowest pKa value .

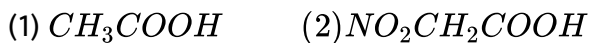


Answer: C



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152. The correct order of increasing strength of compounds



A. $4 > 3 > 2 > 1$

$$B. 3 > 2 > 1 > 4$$

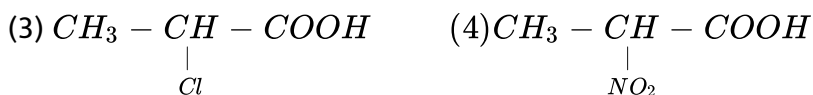
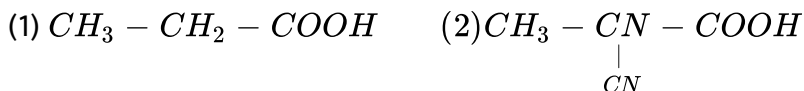
$$C. 3 > 1 > 2 > 4$$

$$D. 3 > 4 > 2 > 1$$

Answer: B

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153. Among the following acidic strength is



$$A. 4 > 1 > 2 > 3$$

$$B. 3 > 4 > 2 > 1$$

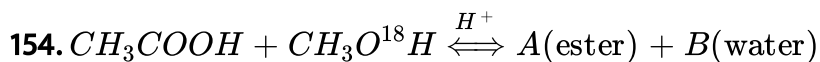
$$C. 4 > 2 > 3 > 1$$

$$D. 4 > 3 > 2 > 1$$

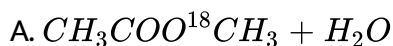
Answer: C



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Alcohol contain isotopic oxygen $\{O^{18}\}$. The isotopic oxygen will be in



C. both are correct

D. none is correct

Answer: A



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155. Select incorrect statement

A. NaOH is strong enough to remove the proton from phenols and carboxylic acids

B. NaHCO_3 is only strong enough to remove the proton of
carboxylic acids

C. Mixture of phenol and carboxylic acid can be separated using
 NaHCO_3

D. Mixture of phenol and carboxylic acid can be separated using NaOH

Answer: D



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156. What is the main reason for the fact that carboxylic acid can undergo ionization ?

A. Absence of alpha - hydrogen

B. Resonance stabilization of the carboxylate ion

C. High reactivity of alpha- hydrogen

D. Less reactivity of α - H atom

Answer: B

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157. Tollen's reagent is reduced by

A. HCOOH

B. CH_3COOH

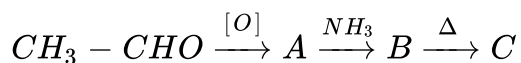
C. CH_2ClCOOH

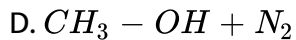
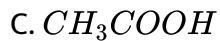
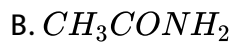
D. CCl_3COOH

Answer: A

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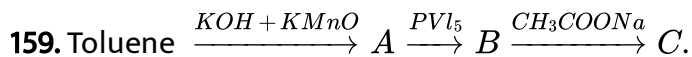
158. The end product of following sequence of reaction is





Answer: B

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Product ' C is

A. benzoic ethanoic unhydride

B. benzophenone

C. acetophenone

D. benzoquinone

Answer: A

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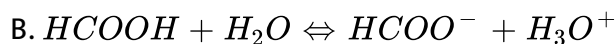
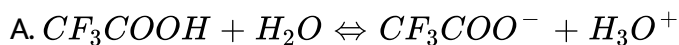
160. Propionic acid on bromination in the presence of red phosphorus gives 2-bromo propionic acids it shows

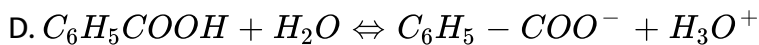
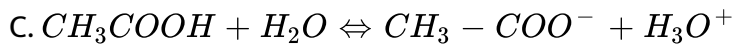
- A. optical isomers
- B. tautomerism
- C. cis- trans isomers
- D. metamerism

Answer: A

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161. Which has maximum value of equilibrium constant ?

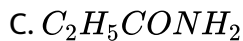
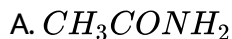




Answer: A

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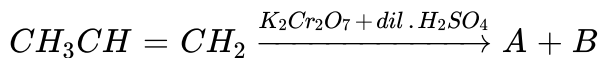
162. When propionic acid is heated with ammonia give,



Answer: C

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163. Product 'A' and 'B' in the following reaction is



- A. acetone
- B. acetaldehyde and formaldehyde
- C. propanoic acid
- D. acetic acid and formic acid

Answer: D



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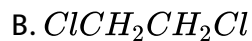
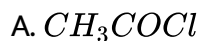
164. Sodium acetate reacts with acetyl chloride to give

- A. acetic acid
- B. acetic anhydride
- C. methyl acetate
- D. ethyl acetate

Answer: B

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165. Acetic acid react with PCl_5 gives ,



Answer: A

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166. Which of the following compound reacts with $NaHCO_3$ solution to give sodium salt and carbon dioxide ?

A. Phenol

B. 1- propanol

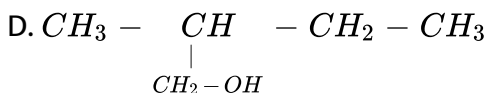
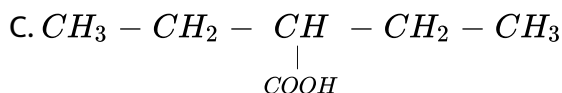
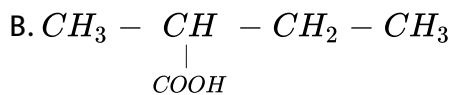
C. Acetic acid

D. Nitric acid

Answer: C

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167. An optically active compound 'X' evolve CO_2 with $NaHCO_3$. The 'X' react with $LiAlH_4$ gives chiral compound. The compound 'X' is



Answer: B

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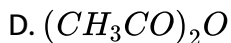
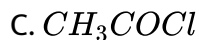
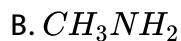
168. An propanoyl chloride is formed when PCl_5 reacts with an

- A. propanoic acid
- B. alcohol
- C. acetic acid
- D. ester

Answer: A

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169. Which of the following substance will give amide, when it reacts with NH_3 ?



Answer: C

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170. Formic acid is a stronger acid than acetic acid .

This is due to the fact that

A. formic acid is reducing agent

B. formic acid molecule is of smaller size

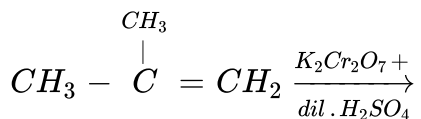
C. there is no alkyl group on α - carbon in formic acid

D. formic acid does not undergo association

Answer: C

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171. What are the product in the following reaction ?



A. $CH_3 - COCH_3$ and $H - COOH$

B. $CH_3 - CH_2CHO$ and CO_2

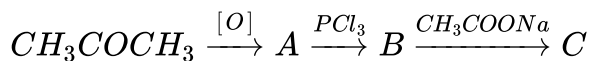
C. $CH_3 - COOH$ and $H - COOH$

D. $CH_3 - CHO$ and $H - COOH$

Answer: A

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172. Product of the following reaction is



A. acetic unhydride

B. propanoic unhydride

C. ethyl propanoate

D. isopropyl alcohol

Answer: A

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173. Which of the following does not under go HVZ reaction ?

A. $CH_3 - COOH$

B. $CH_3 - CH_2 - COOH$

C. $CH_3 - \overset{CH_3}{\underset{|}{CH}} - COOH$

D. $(CH_3)_3 - C - COOH$

Answer: D

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174. During formation of anhydride from P_2O_5 and acid. The acid molecule undergoes

- A. intermolecular dehydration
- B. intramolecular dehydration
- C. oxidation
- D. hydration

Answer: A



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175. Acetic anhydride is obtained by the reaction of

- A. sodium and acetic acid
- B. ammonia and acetic acid
- C. ethanol and acetic acid
- D. P_2O_5 and acetic acid .

Answer: D

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176. An ester is subjected to hydrolyse. Product of hydrolysis will be tested for

- A. carboxylic acid and alcoholic group
- B. carboxylic acid and ketonic group
- C. carboxylic acid and aldehyde group
- D. aldehyde and ketonic group

Answer: A

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177. Carboxylic acid reacts with potassium metal.

The amount of potassium used up and hydrogen liberated are in the

molar ratio of

A. 2:1

B. 1:1

C. 3:2

D. 2:3

Answer: A



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178. HVZ reaction is characteristic reaction of

A. α - H atom

B. β - H atom

C. γ - H atom

D. δ - H atom

Answer: A



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179. Carboxylic acid reacts with calcium metal .The amount of calcium used up and hydrogen liberated are in the molar ratio of

A. 2 : 1

B. 1 : 1

C. 3 : 2

D. 2 : 3

Answer: B



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180. Two molecules of acetic acid are heated with P_2O_5 . The product formed is

A. two moles of ethanol

B. two moles of methyl cyanide

C. acetic anhydride

D. formic acid

Answer: C

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181. Carboxylic acid can

A. decompose carbonate and evolve CO_2

B. reacts with metal forming H_2 gas

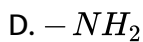
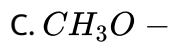
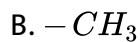
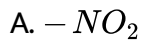
C. neutralise ammonium hydroxide form salt

D. all of the above

Answer: D

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182. Which of the following group will increase more acidity of acetic acid ?

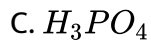
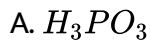


Answer: A



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183. P_2O_5 is anhydride of



Answer: B



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184. The solvent that can dissolve all the carboxylic acids is

A. water

B. dil. HCl

C. dil. NaOH

D. conc. H_2SO_4

Answer: C



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185. Acetyl chloride can be prepared

A. by the action of CH_3COOH with chloroform

B. by the action of PCl_3 on acetic acid

C. by the action of Cl_2 on acetic acid

D. by the action of CCl_4 on acetic acid

Answer: B

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186. Of the following four reactions, formic and acetic acid differ in which respect ?

A. Formation of ester with alcohol

B. Replacement of hydrogen by sodium

C. Reduction of Fehling solution

D. Blue litmus reaction

Answer: C

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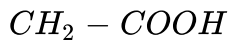
187. Arrange the following carboxylic acid in their decreasing acidity



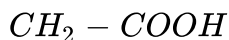
(1) | Oxalic acid



(2) $\text{HOOC} - \text{CH}_2 - \text{COOH}$ Malonic acid



(3) | Succinic acid



A. $3 > 2 > 1$

B. $1 > 2 > 3$

C. $2 > 3 > 1$

D. $2 > 1 > 3$

Answer: B



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188. Among the following which compound will react with Na_2CO_3 solution to give sodium salt and CO_2 ?

A. Phenol

B. 1- hexanol

C. Formic acid

D. Ethanal

Answer: C

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189. The compounds formed by the acid by the acid hydrolysis of ethyl acetate are

A. formic acid and propanol

B. acetic acid and ethanol

C. acetone and ethanol

D. acetone and methanol

Answer: B

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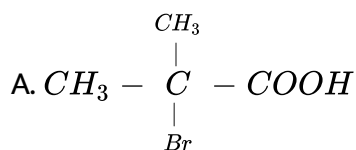
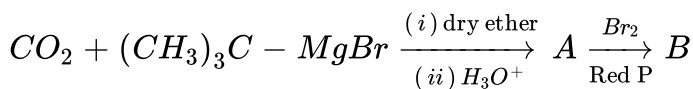
190. – $COOH$ group of a compound does not react with $NaHSO_3$ even though it has $>C=O$ group because of

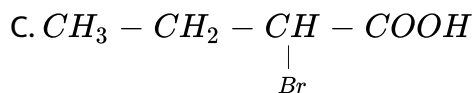
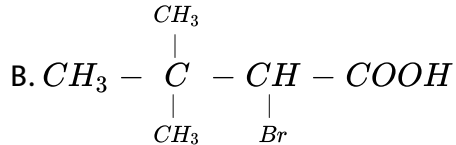
- A. cyclic structure
- B. acidic character
- C. linear structure
- D. resonance

Answer: D

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191. Final product of following reaction is





D. No product will be formed .

Answer: D

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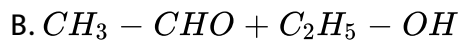
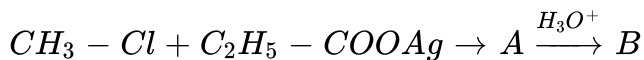
192. Acids having higher B.P. than alcohols because of

- A. intra molecular HB
- B. dimerisation of acid
- C. dipole - dipole attraction
- D. Vander Waals force of attraction

Answer: B

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193. Product of the following reaction is



Answer: C

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194. Adipic acid is formed by oxidation of

A. cyclohexane

B. cyclohexene

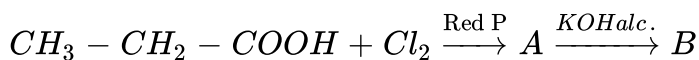
C. hex - 1- ene

D. hex -2- ene

Answer: B

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195. Product 'B' of the following



Answer: C

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196. Which of the following does not give HVZ reaction ?

- A. Acetic acid
- B. Propionic acid
- C. Isobutyric acid
- D. Neovaleric acid

Answer: D



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197. Product 'B' of the following



- A. $CH_3 - CH_2 - CHOH - COOH$
- B. $CH_3 - CHOH - CH_2 - COOH$
- C. $HO - CH_2 - CH_2 - CH_2 - COOH$
- D. $CH_3 - CH = CH - COOH$

Answer: A



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198. Terephthalic acid is heated with ammonia gives

- A. phthalamide
- B. phthalimide
- C. isophthalic
- D. ammonium phthalate

Answer: B



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