

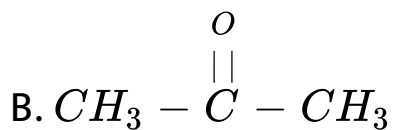
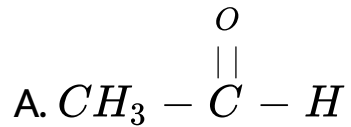
CHEMISTRY

BOOKS - DISHA CHEMISTRY (HINGLISH)

ALDEHYDES, KETONES AND CARBOXYLIC ACIDS

Mcqs

1. Which of the following compounds is most reactive towards nucleophilic addition reactions?



C. 

D. 

Answer: A

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2. Arrange the following in order of decreasing acidity



A. $B > A > C$

B. $C > B > A$

C. $A > C > B$

D. $A > B > C$

Answer: A



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3. A and B in the following reactions are



A. 

B. 

C. 

D. $A = RR'CH_2CN, B = NaOH$

Answer: A



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4. Acetaldehyde reacts with

A. Electrophiles only

B. Nucleophiles only

C. Free radicals only

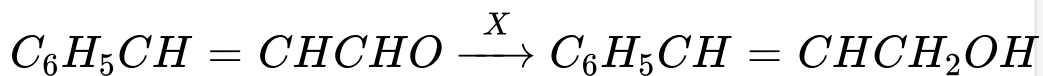
D. Both electrophiles and nucleophiles

Answer: B

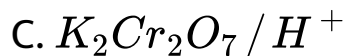
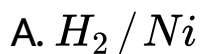


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5.



In the above sequence X can be :



D. Both (a) and (b)

Answer: B



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6. Which one of the following can be oxidised to the corresponding carbonyl compound?

A. 2-hydroxy-propane

B. Ortho-nitro-phenol

C. Phenol

D. 2-methyl-2 hydroxy-propane

Answer: A



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7. In the following reaction sequence, the correct structures of E, F and G are



A. 

B. 

C. 

D. 

Answer: C



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8. ketones $[R - \underset{\text{O}}{\underset{||}{C}} - R_1]$, where $R = R_1 =$ alkyl

groups] can be obtained in one step by

A. oxidation of primary alcohols

B. hydrolysis of esters

C. oxidation of tertiary alcohols

D. reaction of acid halides with alcohols

Answer: C



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9. The compound that neither forms semicarbazone nor oxime is

A. HCHO

B. CH_3COCH_2Cl

C. CH_3CHO

D. $CH_3CONHCH_3$

Answer: D



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10. Ethyl ester $\xrightarrow[\text{excess}]{\text{CH}_3\text{MgBr}}$ P. The product P will be

A. 

B. 

C. 

D. 

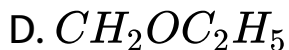
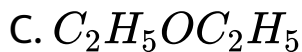
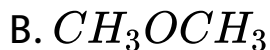
Answer: A



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11. Which of the following compounds when heated with CO at 150°C and 500 atm pressure in presence

of BF_3 forms ethyl propionate ?



Answer: C



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12. Benzaldehyde is obtained from Rosenmund's reduction of

A. 

B. 

C. 

D. 

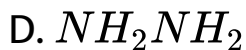
Answer: B



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13. Acetone oxime is obtained by reacting acetone with

A. NH_3



Answer: B



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14.



Which of the following statements are correct regarding the above reduction of benzaldehyde to benzyl alcohol?

(i) One hydrogen is coming from H_2O as H^+ and another from C_6H_5CHO as H^-

(ii) One hydrogen is coming from H_2O as H^- and another from C_6H_5CHO as H^+

(iii) One hydrogen from H_2O and another from C_6H_5CHO , both in the form of H^-

(iv) The reduction is an example of disproportionation reaction

A. (i),(ii) and (iii)

B. (i) and (iv)

C. (ii),(iii) and (iv)

D. (iii) and (iv)

Answer: B



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15. A carboxylic acid can best be converted into acid chloride by using



Answer: D

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16. Among the given compounds, the most susceptible to nucleophilic attack at the carbonyl group is

A. MeCOCl

B. MeCHO

C. MeCOOMe

D. MeCOOCOMe

Answer: A

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17. Pinacolone is

A. 2, 3-Dimethyl-2, 3-butanediol

B. 3,3-Dimethyl-2-butanone

C. 1-Phenyl-2-propanone

D. 1, 1-Diphenyl-1, 2-ethandiol

Answer: B

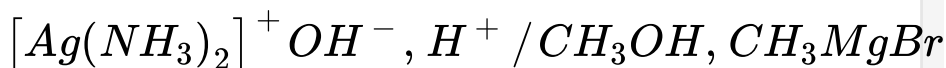


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18. The correct sequence of reagents for the following conversion will be :



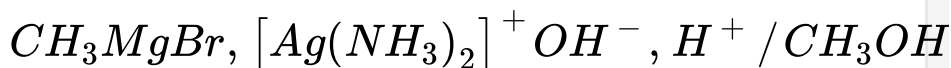
A.



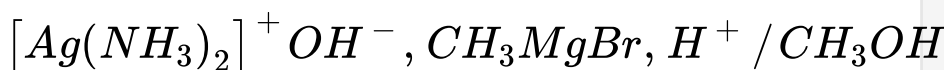
B.



C.



D.



Answer: A



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19. Benzaldehyde reacts with ethanoic KCN to give



Answer: B



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20. Which gives lactic acid on hydrolysis after reacting with HCN?

A. HCHO

B. CH_3CHO

C. C_6H_5CHO

D. CH_3COCH_3

Answer: B



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21. Reduction of  can be carried out with

A. catalytic reduction

B. Na / C_2H_5OH

C. Wolff-Kishner reduction

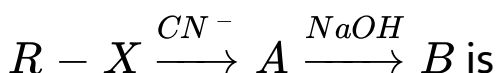
D. $LiAlH_4$

Answer: C



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22. The end product B in the sequence of reactions



A. an alkane

B. a carboxylic acid

C. sodium salt of carboxylic acid

D. a ketone

Answer: C



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23. Phenylmethyl ketone can be converted into ethylbenzene in one step by which of the following reagents?

A. $LiAlH_4$

B. Zn-Hg/HCl

C. $NaBH_4$

D. CH_3MgI

Answer: B



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24. Conversion of acetaldehyde into ethyl acetate in presence of aluminium ethoxide is called

A. Aldol condensation

B. Cope reaction

C. Tischenko reaction

D. Benzoin condensation

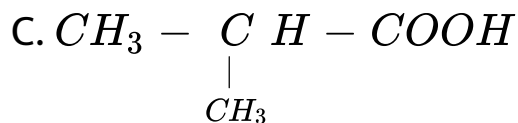
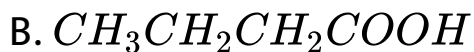
Answer: C



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25. An organic compound A upon reacting with NH_3 gives B. On heating B gives C. C in presence of KOH reacts with Br_2 to give $CH_3CH_2NH_2$. A is :

A. CH_3COOH



Answer: D



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26. Which one of the following can be oxidised to the corresponding carbonyl compound ?

A. 2-hydroxypropane

B. Ortho-nitrophenol

C. Phenol

D. 2-methyl-2 hydroxypropane

Answer: A



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27. The reagent which can be used to distinguish acetophenone from benzophenone is

A. 2,4- dinitrophenylhydrazine

B. aqueous solution of $NaHSO_3$

C. benedict reagent

D. I_2 and Na_2CO_3

Answer: D



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28. $R - CH_2 - CH_2OH$ can be converted into RCH_2CH_2COOH . The correct sequence of reagent is

A. PBr_3, KCN, H^+

B. PBr_3, KCN, H_2

C. KCN, H^+

D. HCN , PBr_3 , H^+

Answer: A

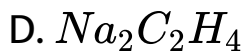


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29. Sodium salt of an organic acid 'X' produces effervescence with conc. H_2SO_4 . 'X' reacts with the acidified aqueous $CaCl_2$ solution to give a white precipitate which decolourises acidic solution of $KMnO_4$. 'X' is :

A. C_6H_5COONa

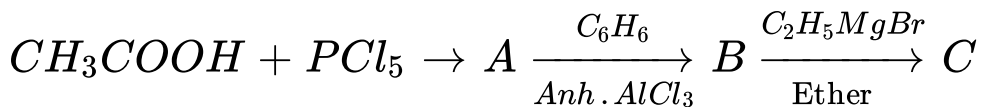
B. $HCOONa$



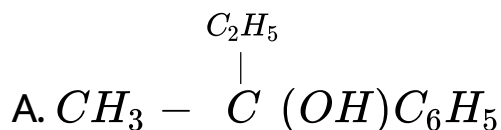
Answer: D

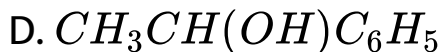
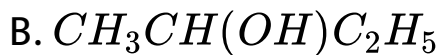
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30. In a set of the given reactions, acetic acid yielded a product C.



Product C would be





Answer: A



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31. Which one of the following will most readily be dehydrated in acidic condition ?



C. 

D. 

Answer: A



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32. Which of the following contain an aldehyde?

A. Vanilla beans

B. Meadow sweet

C. Cinnamon

D. All of these

Answer: D



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33. Heating mixture of sodium benzoate and soda-lime gives

- A. benzene
- B. methane
- C. sodium phenoxide
- D. calcium benzoate

Answer: A

34. Observe the following structures and pick up the correct statement



- A. Carbonyl carbon of I is more electrophilic than that of II
- B. Carbonyl carbon of I is less electrophilic than that of II
- C. Carbonyl carbon of both structures have equal electrophilic character

D. It depends upon the complete structure of the compound

Answer: B



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35. An enantiomerically pure acid is treated with a racemic mixture of an alcohol having one chiral carbon. The ester formed will be

A. Optically active mixture

B. Pure enantiomer

C. Meso compound

D. Racemic mixture

Answer: A



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36. m-Chlorobenzaldehyde on reaction with conc. KOH at room temperature gives

A. Potassium m-chlorobenzoate and m-hydroxybenzaldehyde

B. m-hydroxybenzaldehyde and m-chlorobenzyl alcohol

C. m-chlorobenzyl alcohol and m-hydroxybenzyl alcohol

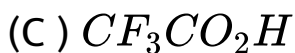
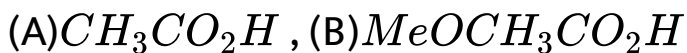
D. potassium m-chlorobenzoate and m-chlorobenzyl alcohol

Answer: D



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37. The correct order of increasing acid strength of the compounds



A. D It A It B It C

B. A It D It B It C

C. B It D It A It C

D. D It A It C It B

Answer: A



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38. The increasing order of the rate of HCN addition to compound A-D is

- (A) HCHO , (B) CH_3COCH_3 , (C) PhCOCH_3 ,
(D) PhCOPh

A. D It C It B It A

B. C It D It B It A

C. A It B It C It D

D. D It B It C It A

Answer: A



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39. The carboxyl functional group (-COOH) is present in

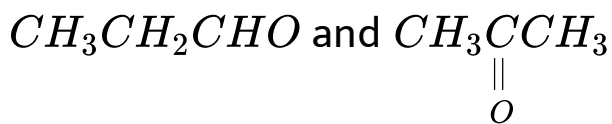
- A. pectic acid
- B. barbituric acid
- C. ascorbic acid
- D. aspirin

Answer: D

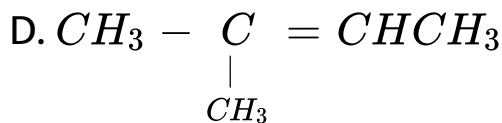
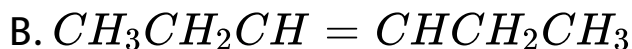


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40. Which alkene on ozonolysis gives



A. 



Answer: A



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41. Which one of the following is reduced with zinc and hydrochloric acid to give the corresponding hydrocarbon ?

- A. Acetamide
- B. Acetic acid
- C. Ethyl acetate
- D. Butan-2-one

Answer: D



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42. Acetal is produced by reacting an alcohol in the presence of dry HCl with

- A. acetaldehyde
- B. ketone
- C. ether
- D. carboxylic acid

Answer: A



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