

Class : XII<sup>th</sup>  
Date :

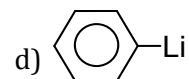
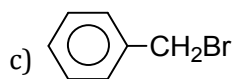
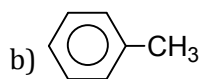
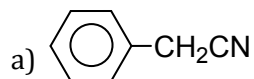
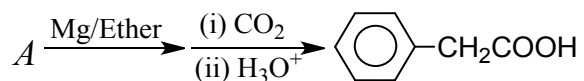
Subject : CHEMISTRY  
DPP No. : 6

## Topic :- Aldehydes, Ketones & Carboxylic Acids

- An ester (*A*) with molecular formula  $C_9H_{10}O_2$  was treated with excess of  $CH_3MgBr$  and the complex so formed was treated with  $H_2SO_4$  to give an olefin (*B*). Ozonolysis of (*B*) gave a ketone with molecular formula  $C_8H_8O$  which shows positive iodoform test. The structure of (*A*) is
  - $C_6H_5COOC_2H_5$
  - $C_6H_5COOC_6H_5$
  - $C_6H_5COOCH_3$
  - $p\text{-H}_3CO - C_6H_4 - COCH_3$
- Acetone reacts with Grignard reagent to form
  - 3° alcohol
  - 2° alcohol
  - Ether
  - No reaction
- When petroleum is heated gradually, first batch of vapours evolved will be rich in:
  - Kerosene
  - Petroleum ether
  - Diesel
  - Lubrication oil
- Decarboxylation of malonic acid gives
  - $CH_4$
  - $CH_3COOH$
  - Both (a) and (b)
  - None of these
- What is the product in the reaction
$$CH_3CONH_2 \xrightarrow{NaOH_2/HCl} X ?$$
  - $CH_3COOH$
  - $CH_3CONH_3Cl^+$
  - $CH_3NH_2$
  - $CH_3CHO$
- Which of the following substances cannot be used for the replacement of  $-OH$  group in organic compounds by  $Cl$ ?
  - $S_2Cl_2$
  - $SOCl_2$
  - $PCl_3$
  - $PCl_5$
- Acetyl nitrate is formed when acetic anhydride reacts with
  - Nitrogen pentoxide
  - Nitric acid
  - Nitrous acid
  - Potassium nitrate
- Which one is not prepared from tartaric acid?
  - Tartar emetic
  - Fenton's reagent
  - Fehling's solution
  - Rochelle salt
- The reagent used in Clemmensen's reduction is
  - Conc.  $H_2SO_4$
  - $Zn-Hg$  / conc.  $HCl$
  - aq.  $KOH$
  - alc.  $KOH$

10. In the reaction,  $C_6H_5COOH + CH_3O^*H \xrightarrow{H^+}$  Ester + water
- a) Isotopically labeled oxygen ( $O^{18}$ ) is present in water  
 b)  $O^{18}$  is present with ester  
 c)  $O^{18}$  shifts from acid to alcohol  
 d) No reaction takes place
11. The technique of gas chromatography is suitable for compounds which are:
- a) Liquids  
 b) Highly volatile  
 c) Soluble in water  
 d) Vaporise without decomposition
12. There are several criteria of purity of organic compounds. Which is considered to be the best?
- a) Melting point  
 b) Mixed melting point  
 c) Colour  
 d) Microscopic examination
13.  $\phi CHO + NH_3 \rightarrow ?$  Product is
- a)  $\begin{array}{c} H \\ | \\ \phi - C - OH \\ | \\ NH_2 \end{array}$       b)  $\phi CH = NH$       c)  $\begin{array}{c} \phi CH = N \\ \diagdown \\ CH\phi \\ \diagup \\ \phi CH = N \end{array}$       d)  $\begin{array}{c} NH_2 \\ | \\ \phi - C \\ | \\ \phi \\ | \\ OH \end{array}$
14. The ease of hydrolysis with an alkali in the compounds
- |                 |                       |
|-----------------|-----------------------|
| $CH_3COCl$      | $CH_3CO - O - COCH_3$ |
| I               | II                    |
| $CH_3COOC_2H_5$ | $CH_3CONH_2$          |
| III             | IV                    |
- Is of the order
- a)  $I > II > III > IV$       b)  $IV > III > II > I$       c)  $I > II > IV > III$       d)  $II > I > IV > III$
15. What is the formula of adipic acid?
- a)  $COOH(CH_2)_4COOH$       b)  $CH_2(COOH)CH_2COOH$       c)  $COOH(CH_2)_3COOH$       d) None of the above
16.  $CH_3CHO$  and  $C_6H_5CH_2CHO$  can be distinguished chemically by:
- a) Tollen's reagent test      b) Fehling solution test      c) Benedict test      d) Iodoform test
17. Acrolein on complete reduction gives:
- a) Allyl alcohol      b) Propanol      c) Propanal      d) None of these

18. Identify the starting material of the following reaction



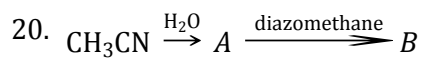
19. Which one of the following is not a fatty acid?

a) Stearic acid

b) Palmitic acid

c) Oleic acid

d) Phenyl acetic acid



A and B are

a) Acetamide, N-methyl acetamide

b) Acetic acid, ethyl ethanoate

c) Acetic acid, methyl acetate

d) Acetamide, acetone

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