DPP
DAILY PRACTICE PROBLEMS

Class : XIIth **Subject : CHEMISTRY**
Date : **DPP No. : 7**

Topic :- Aldehydes, Ketones & Carboxylic Acids

1. An acyl halide is formed when PCl_5 reacts with an:
   a) Acid b) Alcohol c) Amine d) Ester

2. Generally it is more difficult to purify organic compounds than inorganic compounds because:
   a) They are very unstable
   b) Their m. p. and b. p. are low
   c) Organic compounds have low solubility
   d) Physical constants of organic compounds and the impurities associated with them are very close to each other

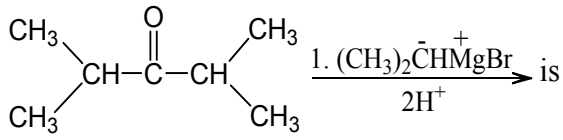
3. The acetophenone can be converted to ethylbenzene by reaction with
   a) $LiAlH_4$ b) H_2NOH c) $Pd/BaSO_4 - H_2$ d) $Zn - Hg/HCl$

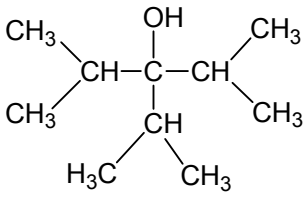
4. When propionic acid is treated with aqueous sodium bicarbonate, CO_2 is liberated. The C from CO_2 comes from
   a) Methyl group b) Carboxylic acid group
   c) Methylene group d) Bicarbonate

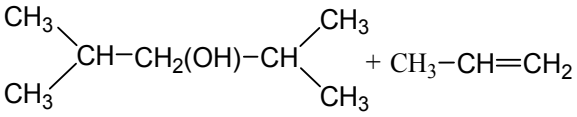
5. Boiling points of carboxylic acid are:
   a) Lower than corresponding alcohols
   b) Higher than corresponding alcohols
   c) Equal to that of corresponding alcohols
   d) None of the above

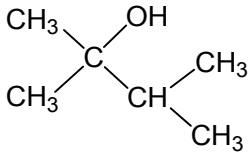
6. The —COOH group in a carboxylic acid can be replaced by 'H' by heating the acid with:
   a) Zn with HCl
   b) H_2 in presence of nickel
   c) Sodalime
   d) Bromine and concentrated aqueous alkali

7. The product obtained in the reaction



a) 

b) 

c) 

d) There is no reaction

8. Which of the following would produce secondary alcohol?

a) $C_6H_5COCH_3 \xrightarrow[2.\ H^+]{1.\ CH_3MgBr}$

b) $C_6H_5COCH_3 \xrightarrow[2.\ H^+]{1.\ LiAlH_4}$

c) $C_6H_5CHO \xrightarrow[2.\ H^+]{1.\ CH_3MgBr}$

d) $CH_3CHO \xrightarrow[2.\ H^+]{1.\ LiAlH_4}$

9. Which factor/s will increase the reactivity of >C=O group?

I. Presence of a group with positive inductive effect.
II. Presence of a group with negative inductive effect.
III. Presence of large alkyl group.

a) Only (i) b) Only (ii) c) (i)and(iii) d) (ii)and (iii)

10. $CH_3CH_2CH_2COOH \xrightarrow{\text{Red P/Br}_2} CH_3CH_2\underset{\underset{Br}{|}}{CH}-COOH$

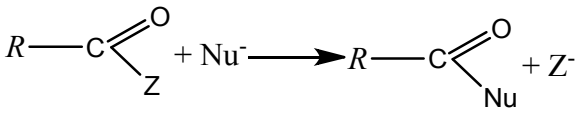
This reaction is called the

a) Cannizaro reaction b) Schrodinger reaction
c) Hell-Volhard-Zelinsky reaction d) Reimer-Tiemann reaction

11. $(CH_3)_2C=CHCOCH_3$ can be oxidised to $(CH_3)_2C=CHCOOH$ by:

a) Cu at 300°C b) $KMnO_4$ c) Chromic acid d) NaOI

12. The correct order of decreasing boiling points of CH_3CONH_2 (A), CH_3COCl (B), CH_3COOH (C) and $(CH_3CO)_2O$ (D) is:
a) $A > D > C > B$ b) $A > B > C > D$ c) $D > C > B > A$ d) None of these

13. Rate of reaction,

is fastest when Z is
a) Cl b) NH_2 c) OC_2H_5 d) $OCOCH_3$

14. Which is useful for separating benzoic acid from a mixture of benzoic acid and methyl benzoate?
a) $NaHCO_3(aq.)$ b) Dil. HCl c) Dil. H_2SO_4 d) Dil. HNO_3

15. The compound X, in the reaction is
$X \xrightarrow{CH_3CHO} Y \xrightarrow{\text{Hydrolysis}} Mg(OH)I + CH_3COOH$
a) CH_3CHO b) CO_2 c) $(CH_3)_2CO$ d) HCHO

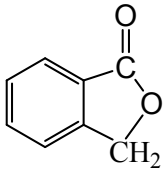
16. Which of the following does not undergo polymerization?
a) CH_3CHO b) HCHO c) CH_3COCH_3 d) None of these

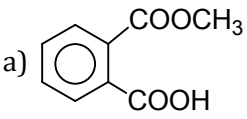
17. The reaction ,
$RCOOAg + Br_2 \xrightarrow{CCl_4} RBr + AgBr + CO_2$ is called:
a) HVZ reaction b) Hunsdiecker reaction c) Hofmann's reaction d) Carbylamine reaction

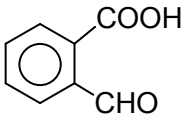
18. Methyl ketones are characterised through:
a) The Tollen's reagent
b) The iodoform test
c) The Schiff's test
d) The Benedict's reagent

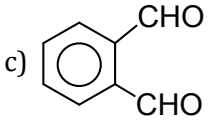
19. An organic compound X contains Y and Z impurities. Their solubility differs slightly. They may be separated by:
a) Simple crystallization
b) Fractional crystallization
c) Sublimation
d) Fractional distillation

20. Which of the following reactants on reaction with conc. NaOH followed by acidification gives following lactone as the product



a) 

b) 

c) 

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