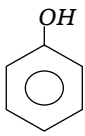


Carboxylic acids and Their derivatives

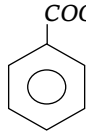
Self Evaluation Test -28

- Which of the following is the weakest acid[CPMT 2001]



(a)

(b) CH_3COOH



(d)

(c) $HCOOH$
- Pyruvic acid is obtained by [AFMC 1995]

(a) Oxidation of acetaldehyde cyanohydrin
(b) Oxidation of acetone cyanohydrin
(c) Oxidation of formaldehyde cyanohydrin
(d) None of these
- The product obtained by dry distillation of calcium formate on reacting with ammonia yields

(a) Formamide (b) Acetamide
(c) Acetaldehyde ammonia (d) Urotropine
- In the reaction

$$C_8H_6O_4 \xrightarrow{\Delta} X \xrightarrow{NH_3}$$
 The compound X is [Roorkee Qualifying 1998]

(a) Phthalic anhydride (b) Phthalic acid
(c) o-xylene (d) Benzoic acid
- Ethyl acetate reacts with CH_3MgBr to form [MP PET 1999]

(a) Secondary alcohol (b) Tertiary alcohol
(c) Primary alcohol and acid (d) Acid
- In quick vinegar process of acetic acid, the temperature of mixture is [RPMT 2003]

(a) 300 K (b) 427 K
(c) 500 K (d) 350 K
- Formic acid can reduce [CPMT 1987]

(a) Tollen's reagent (b) Mercuric chloride
(c) $KMnO_4$ (d) All of these
- 0.2 gm of fine animal charcoal is mixed with half litre of acetic acid (–SM) solution and shaken for 30 minutes [BHU 1998]

(a) The concentration of the solution decreases
(b) Concentration increases
(c) Concentration remains same
(d) None of these
- Dimerisation in carboxylic acid is due to [KCET 2002]

(a) Ionic bond
(b) Covalent bond
(c) Coordinate bond
(d) Intermolecular hydrogen bond
- A colourless organic compound gives brisk effervescences with a mixture of sodium nitrite and dil. HCl . It could be [CPMT 1978]

(a) Glucose (b) Oxalic acid
(c) Urea (d) Benzoic acid
- What is formed when benzoyl chloride reacts with aniline in presence of sodium hydroxide [BHU 1996]

(a) Acetanilide (b) Benzanilide
(c) Benzoic acid (d) Azobenzene
- Strong acid among the following is [CBSE PMT 1992; AFMC 1998; BHU 2000]

(a) CF_3COOH (b) CBr_3COOH
(c) CH_3COOH (d) CCl_3COOH
- Aspirin is obtained by the reaction of salicylic acid with [AFMC 1998]

(a) Acetone (b) Acetaldehyde
(c) Acetyl chloride (d) Acetic anhydride
- Oxalic acid when reduced with zinc and H_2SO_4 gives [Tamil Nadu CET 2001]

(a) Glyoxallic acid (b) Glyoxal
(c) Glycollic acid (d) Glycol
- A distinctive and characteristic functional group in fats is [NCERT 1981; MP PET 1995]

(a) A ketonic group
(b) An ester group
(c) A peptide group
(d) An alcoholic group

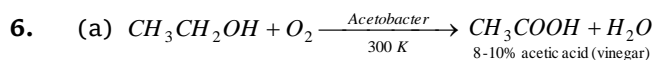
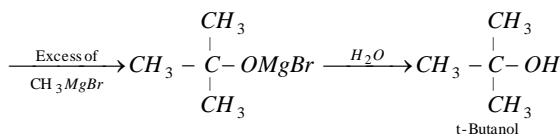
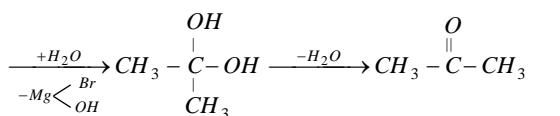
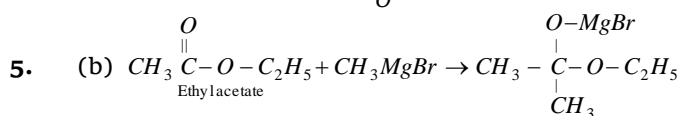
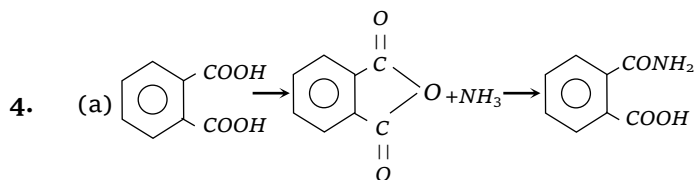
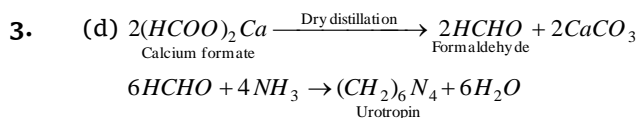
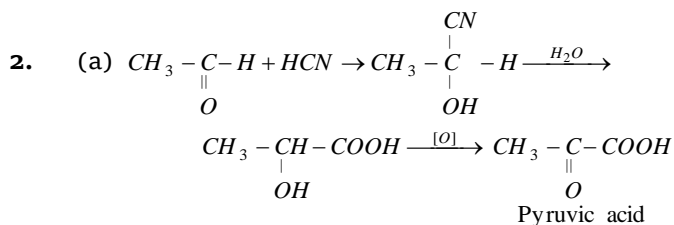
1360 Carboxylic acids and Their derivatives

16. Which substance will give amide when heated with NH_3 [CPMT 1997]
 (a) Potassium (b) Hydrogen
 (c) Ethane (d) Nitrogen
17. Which acid has least pK_a value [CPMT 1982]
 (a) $Cl_3C.COOH$ (b) $Cl_2CH.COOH$
 (c) $Cl.CH_2COOH$ (d) CH_3COOH

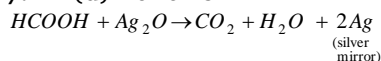
Answers and Solutions

(SET -28)

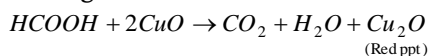
1. (a) Phenol is a weaker acid than carboxylic acids.



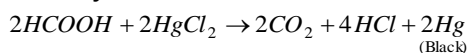
7. (d) Tollen's reagent



Fehling solution -



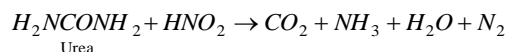
Mercury chloride -



8. (a) Activated charcoal adsorbed the impurity of acetic acid by which the concentration of acetic acid solution decrease.

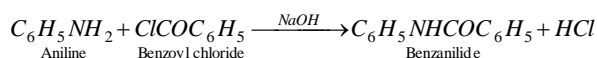
9. (d) Intermolecular hydrogen bonding leads to dimerisation of carboxylic acid in non-aqueous solvents.

10. (c) $NaNO_2 + HCl \rightarrow HNO_2 + NaCl$

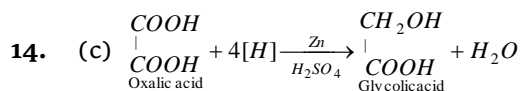
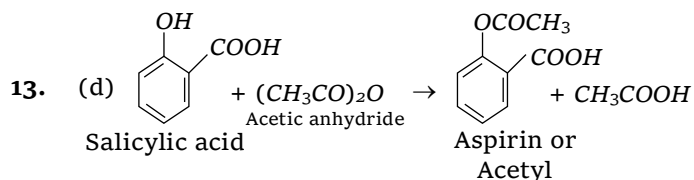


CO_2 evolve with brisk effervescence.

11. (b) It is known as Schotten Baumann reaction.



12. (a) Due to -I effect of three F atom CF_3COOH is a strong acid.



15. (b) Fat is the ester of higher acids & glycerol.

16. (a) $2K + 2NH_3 \rightarrow 2KNH_2 + H_2$

17. (a) ($Cl_3C - COOH$) Trichloroacetic acid has least pK_a value and is most acidic.
