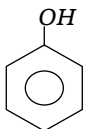
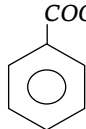


Carboxylic acids and Their derivatives

Self Evaluation Test -28

1. Which of the following is the weakest acid [CPMT 2001]
- (a)  (b) CH_3COOH
- (c) $HCOOH$ (d) 
2. 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
3. The product obtained by dry distillation of calcium formate on reacting with ammonia yields
- (a) Formamide (b) Acetamide
(c) Acetaldehyde ammonia (d) Urotropine
4. 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
5. Ethyl acetate reacts with CH_3MgBr to form [MP PET 1999]
- (a) Secondary alcohol (b) Tertiary alcohol
(c) Primary alcohol and acid (d) Acid
6. 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
7. Formic acid can reduce [CPMT 1987]
- (a) Tollen's reagent (b) Mercuric chloride
(c) $KMnO_4$ (d) All of these
8. 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
9. Dimerisation in carboxylic acid is due to [KCET 2002]
- (a) Ionic bond
(b) Covalent bond
(c) Coordinate bond
(d) Intermolecular hydrogen bond
10. 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
11. 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
12. 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
13. Aspirin is obtained by the reaction of salicylic acid with [AFMC 1998]
- (a) Acetone (b) Acetaldehyde
(c) Acetyl chloride (d) Acetic anhydride
14. 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
15. 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



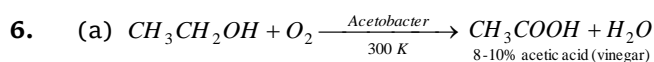
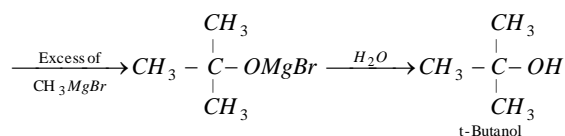
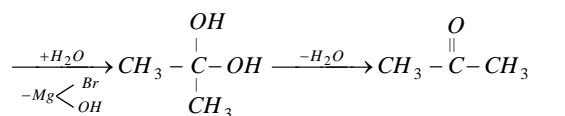
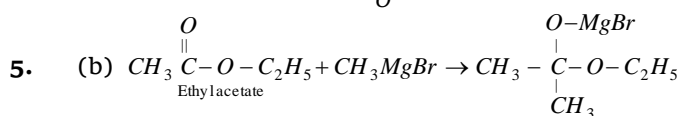
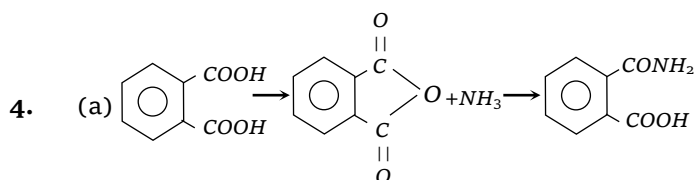
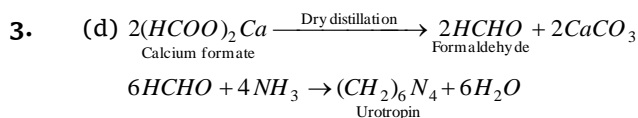
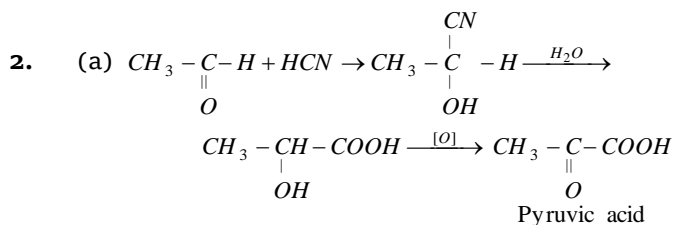
1360 Carboxylic acids and Their derivatives

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

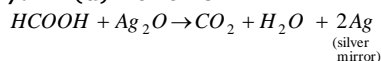
AS Answers and Solutions

(SET -28)

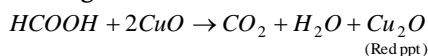
1. (a) Phenol is a weaker acid than carboxylic acids.



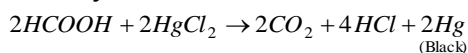
7. (d) Tollen's reagent



Fehling solution -



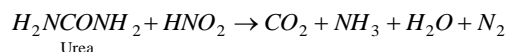
Mercury chloride -



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

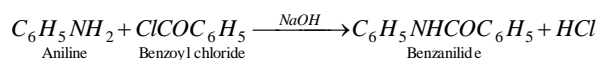
9. (d) Intermolecular hydrogen bonding leads to dimerisation of carboxylic acid in non-aqueous solvents.

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

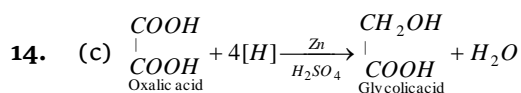
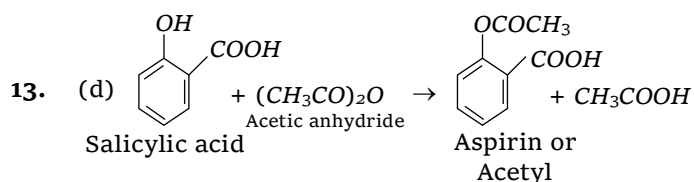


CO_2 evolve with brisk effervescence.

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 pka value and is most acidic.
