

## B. Sc S Y (II-SEM) Organic Chemistry-VII

### MCQS on Carboxylic acid

- Hydrolysis of  $\text{CH}_3\text{CH}_2\text{NO}_2$  with 85%  $\text{H}_2\text{SO}_4$  gives which of the following compound?
  - $\text{CH}_3\text{CH}_2\text{OH}$
  - $\text{C}_2\text{H}_6$
  - $\text{CH}_3\text{CH}=\text{NOH}$
  - $\text{CH}_3\text{COOH}$
- Acetic acid is obtained when which of the given reaction takes place?
  - Methyl alcohol is oxidised with potassium permanganate
  - Calcium acetate is distilled in the presence of calcium formate
  - Acetaldehyde is oxidised with potassium dichromate and sulphuric acid
  - Glycerol is heated with sulphuric acid
- Acetic acid is manufactured by the fermentation of which of the following reaction?
  - Ethanol
  - Methanol
  - Ethanal
  - Methanal
- When benzyl alcohol is oxidised with  $\text{KMnO}_4$ , the product obtained is which of the following compound?
  - Benzaldehyde
  - Benzoic acid
  - $\text{CO}_2$  and  $\text{H}_2\text{O}$
  - Benzophenone
- Which of the following gives benzoic acid on oxidation?
  - Chlorophenol
  - Chlorotoluene
  - Chlorobenzene
  - Benzyl chloride
- The below reaction is called as which of the following name reaction?
$$\text{CH}_3\text{CH}=\text{CH}_2 \xrightarrow[\text{H}^+]{\text{CO}+\text{H}_2\text{O}} \text{CH}_3-\underset{\text{COOH}}{\text{CH}}-\text{CH}_3$$
  - Wurtz reactions
  - Koch reaction
  - Clemenson's reduction
  - Kolbe's reaction
- The acid which reduces Fehling solution is which of the following?
  - Methanoic acid

- b) Ethanoic acid
  - c) Butanoic acid
  - d) Propanoic acid
8. Which class of compounds shows H-bonding even more than in alcohols?
- a) Phenols
  - b) Carboxylic acids
  - c) Ethers
  - d) Aldehydes
9. Which of the following is the strongest acid?
- a)  $\text{CH}_3\text{COOH}$
  - b)  $\text{BrCH}_2\text{COOH}$
  - c)  $\text{ClCH}_2\text{COOH}$
  - d)  $\text{FCH}_2\text{COOH}$
10. Which one is strongest acid among following options?
- a)  $\text{CH}_2\text{FCOOH}$
  - b)  $\text{CH}_2\text{ClCOOH}$
  - c)  $\text{CHCl}_2\text{COOH}$
  - d)  $\text{CHF}_2\text{COOH}$
11. Acetic acid is weak acid than sulphuric acid because which of the following reasons?
- a) It decomposes on increasing temperature
  - b) It has less degree of ionisation
  - c) It has  $-\text{COOH}$  group
  - d) It has more inductive effect
12. Carboxylic acids are more acidic than phenol and alcohol because of which of the following?
- a) Intermolecular hydrogen bonding
  - b) Formation of dimers
  - c) Highly acidic hydrogen
  - d) Resonance stabilization of their conjugate base
13. When propionic acid is treated with aqueous sodium bicarbonate  $\text{CO}_2$  is liberated. The 'C' of  $\text{CO}_2$  comes from which of the following?
- a) Methyl group
  - b) Carboxylic acid group
  - c) Methylene group
  - d) Bicarbonate
14. When  $\text{CH}_3\text{COOH}$  reacts with  $\text{CH}_3\text{-Mg-X}$ , which of the following is formed?
- a)  $\text{CH}_3\text{COX}$  is formed
  - b) Hydrocarbon is formed
  - c) Acetone is formed
  - d) Alcohol is formed

15. Sulphonation of benzoic acid produces mainly which of the following?
- a) o-sulphobenzoic acid
  - b) m-sulphobenzoic acid
  - c) p-sulphobenzoic acid
  - d) o- and p-sulphobenzoic acid
16. Benzoyl chloride is prepared from benzoic acid by which of the following?
- a)  $\text{Cl}_2$ , hv
  - b)  $\text{SO}_2$ ,  $\text{Cl}_2$
  - c)  $\text{SOCl}_2$
  - d)  $\text{Cl}_2$ ,  $\text{H}_2\text{O}$
17. When formic acid reacts with  $\text{PCl}_5$  it forms which of the following?
- a) Formyl chloride
  - b) Acetyl chloride
  - c) Methyl chloride
  - d) Propionyl chloride
18. Which of the following gives benzoic acid on oxidation?
- a) Chlorophenol
  - b) Chlorotoluene
  - c) Chlorobenzene
  - d) Benzyl chloride

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