

12th Science : Chemistry Aldehydes, Ketones and Carboxylic acids,

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Note:-

- 1. All Questions are compulsory.
- 2. Numbers on the right indicate full marks.

Section A Multiple choice question

(4)

- 1. Reduction by LiAlH $_{\Lambda}$ of hydrolysed product of an ester gives
 - A) two acids

B) two aldehydes

C) one molecule of alcohol and another of carboxylic acid

D) two alcohols

SEAT NO

- 2. Benzoic acid gives benzene on being heated with X and phenol gives benzene on being heated with Y. Therefore, X and Y are respectively
 - A) sodalime and copper
- B) Zn dust and NaOH
- C) Zn dust and sodalime
- D) sodalime and zinc dust
- 3. Benzaldehyde when treated with alkaline $\mathsf{KMnO}_\mathtt{\Delta}$ yields
 - A) Benzyl alcohol
- B) Benzoic acid
- C) CO_2 and H_2O
- D) Salicylic acid
- 4. Para aldehyde is obtained by polymerization of:
 - A) CH₃CH₂-CHO
- B) CH₃CHO
- C) CH₂OH
- D) HCHO

Section B Attempt any 3 questions

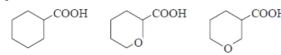
(6)

- 1. Explain the naming when two or more functional groups are in a benzene ring.
- 2. Name the product obtained by the oxidation of 1,2,3,4-tetrahydronaphthalene with acidified potassium permanganate.
- 3. Explain the states of : (a) Formaldehyde (b) Acetaldehyde
- 4. How does > C = C < differ from > C = O group in chemical reactions?

Section C Attempt Any 2 Questions

(6)

1. Arrange the following carboxylic acids with increasing order of their acidic strength and justify your answer.



- 2. Write a note on: Carboxylic acids
- 3. Explain acidic character of carboxylic acid.

Section D Attend any 1 question

(4)

- State the rules applied in IUPAC names of aldehydes and carboxylic acids.

2. Predict the products (name and structure) in the following reactions.
1.
$$CH_3CH_2CN \xrightarrow{\Delta} \underbrace{\frac{\Delta}{dil.HCl}}$$
2. $CH_3 - CONH_2 \xrightarrow{\Delta} \underbrace{\frac{\Delta}{dil.HCl}}$
3. $C_6H_5 - CH_2 - CH_3 \xrightarrow{alk.KMnO_4}$
4. $C_6H_5 - COO - C_2H_5 \xrightarrow{\Delta} \underbrace{\frac{\Delta}{dil.H2SO4}}$
5. $CH_3MgBr \xrightarrow{(i) dry ice/dry \ ether)} \underbrace{(ii) \ dil. HCl}$