Model Question Paper

Carboxylic Acids - Part IV

12th Standard

Chemistry

Reg.No. : | | | | | | |

I.Answer all the questions.

II.Use blue pen only.

Time : 01:30:00 Hrs

Total Marks : 70

Part-A

5 x 1 = 5

1) Lactic acid is the main constituent of

(a) rancid butter (b) sour milk (c) cream (d) vinegar

2) Substances that give metalic silver when treated with asolution of ammoniacal silver nitrate are

(a) benzaldehyde (b) formaldehyde (c) formic acid (d) all the above

3) $CH_3COOH \xrightarrow{A} CH_3 - CH_3$. A for this conversion is

(a) $LiAlH_4$ (b) H_2/P (c) HI/P (d) NaOH/CaO

4) Which of the following upon fermentation using BAL gives lactic acid

(a) propylene (b) cane sugar (c) α - bromo propionic acid (d) acetaldehyde cyanohydrin

5) Pyruvic acid is the oxidation product of

(a) lactic acid (b) acetic acid (c) benzoic acid (d) acetone

Part-B

5 x 3 = 15

6) Write the equation for Claisen ester condensation.

7) What is the action of acetamide with bromine and alkali?

8) What is aspirin ? How it is prepared?

9) Give tests for salicylic acid.

10) What happens when lactic acid is treated with PCI_5? Write the equation.

Part-C

6 x 5 = 30

11) How to do the following conversions? i) Lactic acid to lactide ii) Salicylic acid to methyl salicylate.

12) What happens when benzoic acid reacts with i) con.HNO_3/ con.H_2SO_4 ii) Cl_2/ $FeCl_3$ iii) PCl_5

13) Give the equation for the action of heat on i)Oxalic acid, ii) Succinic acid, iii) Formic acid

14) Write short notes on the following: i) HVZ- reaction, ii)Trans-esterification, iii) Kolbe's electrolytic reaction

15) Explain the following reaction: i) Friedal- Craft's acetylation ii) Trans- esterification reaction.

16) How will you prepare the following from salicylic acid? i) Aspirin ii) Methyl salicylate

Part-D

2X10=20

17) a) How are the following conversions carrioed out i) lactic acid to pyruvic acid ii) Oxalic acid to oxamide iii) Methyl acetate to ethyl acetate

b) Give the reaction of lactic acid with the following: a) fenton's reagent b) dilute acidified $KMnO_4$ c) dilute H_2SO_4

18) a) How are the following conversions carried out? i) Salicylic acid$\rightarrow$ Aspirin, ii) Salicylic acid $\rightarrow$ Methyl salicylate, iii)Acetamide $\rightarrow$ Methyl amine

b) How is benzonic acid prepared from i) toluene ,ii) phenyl cyanide and iii) carbon dioxide?

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