Model Question Paper

Carboxylic Acids - Part III

12th Standard

Chemistry

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

I.Answer all the questions.
II.Use blue pen only.
III.Question number 18 is compulsory.

Time : 01:30:00 Hrs

Total Marks : 70

Part-A

5 x 1 = 5

1) Which of the following compound is optically active ?
   (a) CH_3CH_2COOH (b) $HOOC-CH_2-COOH$ (c) $CH_3CH(OH)COOH$ (d) $Cl_2CHCOOH$
2) $CH_3CH(OH)COOH \xrightarrow{H_2O_2/Fe^{2+}}$? The product is
   (a) $CH_3COCOOH$ (b) CH_3CH_2COOH (c) $CH_3CHOHCHO$ (d) $COOHCH_2COOH$
3) Which of the following compounds will react with $NaHCO_3$ solution to give sodium salt and CO_2?
   (a) acetic acid (b) n-hexanol (c) phenol (d) both (a) and (c)
4) The compound found in some stony deposit in kidneys is
   (a) potassium oxalate (b) oxalic acid (c) potassium succinate (d) calcium oxalate
5) Ethylene cyanide on hydrolysis using acid gives
   (a) oxalic acid (b) succinic acid (c) adipic acid (d) propionic acid

Part-B

5 x 3 = 15

6) Give the preparation of CH_3COOH from Grignard reagent?
7) How dose PCl_5 react with acetic acid and formic acid?
8) How do you prepare HCOOH from glycerol?
9) What is the reduction product of CH_3COOH with HI/P?
10) What is HVZ reaction?

Part-C

6 x 5 = 30

11) i) How is latic acid synthesised from acotylene? ii) How can it be converted into cyclic diester?
12) How will you get latic acid from (i) Propylene,(ii) α - bromo propionic acid?
13) What happens when (i) oxalic acid is treated with NH_3, (ii) benoic acid is treated with PCl_5?
14) How are the following compounds obtained fromlatic acid? (i) pyruvic acid ii) lactyl chloride
15) What is the action of lactic acid with (i) acidified $KMnO_4$,(ii) dil H_2SO_4, (iii) iodine and alkali?
16) i) How is salicylic acid prepared from phenol? ii) How is salicylic acid converted into acetyl salicylic acid?

Part-D

2X10=20

17) a) How are the following compounds obtained from salicylic acid?i) 2,4,6-tri bromo phenol ii) methyl salicylate iii) aspirin
    b) Explain the following conversions i) acetic anhydride to acetamide, ii) acetonitrile to acetamide, iii) acetamide to acetonitrile.
18) a) a) Explain the following (i) Reaction of acetic anhydride with PCl_5, (ii) Claisen easter condensation
       b) Explain the following i) chloro acetic acid is stronger acid than acetic acid ii) Fluoro acetic acid is stronger acid than chloro acetic acid iii) Formic acid is stronger acid than acetic acid

(OR)

    b) a) Distinguish formic acid and acetic acid .
       b) Give the uses of a) oxalic acid and b) Succinic acid.

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