ASSIGNMENT ON CARBOXYLIC ACID

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1.a. Methanoic acid

b. Pentan-I,5-dioic acid

C. Butanoic acid

d. Ethanedioic acid

e. Hexanoicacid

.f. Hex-4-eneoic acid

2. i. all simple aliphatic acids up to C10 are liquids at room temperature.

 ii. boiling point increases with increasing relative molecular mass.

iii. lower molecular mass carboxylic acids with up to four carbon atoms in their molecules are soluble in water.

3. from carbon(II) oxide

From ethanol

4. a. oxidation of primary alcohols and aldehydes

Oxidation of primary alcohols and aldehydes are used to prepare carboxylic acid using oxidizing agents in acidic solution.

RCH2OH [O],excessacid/KMNO RCHO [O] RCOOH

B. hydrolysis of nitrilesor esters

RCN + 2H2O H+ RCOOH + NH4

5. 4RCOOH + 3LiAlH4 (C2H5)2O (RCH2O)4AlI + 2LiAlO2 + 4H2

4H2O

 4RCH2OH +AL(OH)3 + LiOH

b. CH3CH2CH2COONa + NaOH CH3CH2CH3 + Na2CO3

c. CH3CH2CH2COOH + CH3CH2CH2OH H+ CH3CH2CH2COO CH2CH2CH3 + H2O