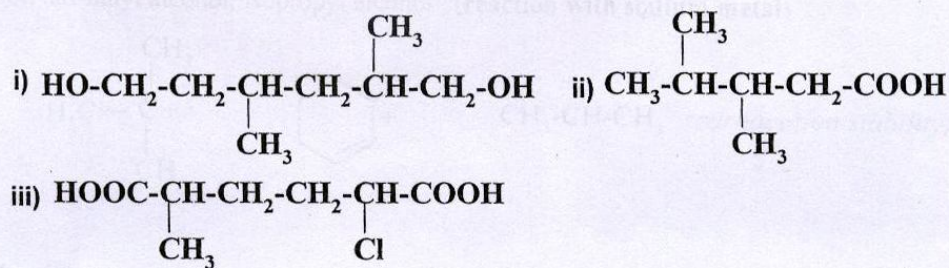


Answer the following questions

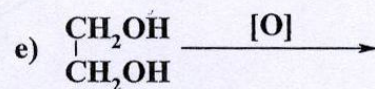
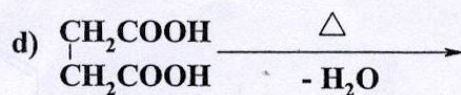
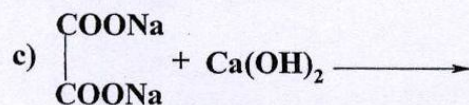
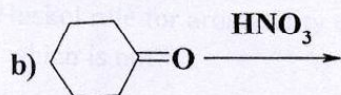
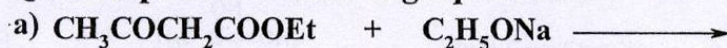
Q1:

a) According to the IUPAC system shows the nomenclature:



b) Explain Reformatsky Reaction for the preparation of citric acid.

Q2: complete the following equations:



Q3: Explain the effect of heat on the followings:

a) Malonic acid

b) Succinic acid

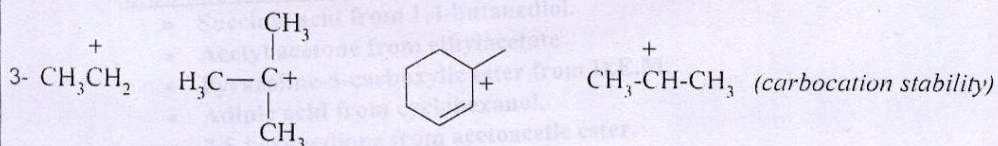
c) Tartaric acid

Q4: A) Draw the structures of the two possible products for the reaction of 1,3-butadiene with bromine. Assign which one is the major product and how it can be formed?

B) Arrange the following compounds as shown:-

1- Chloroacetic acid, acetic acid, fluoroacetic acid, dichloroacetic acid (acid strength strength)

2- Ethyl alcohol, tert-butyl alcohol, isopropyl alcohol (reaction with sodium metal)



Q5: 1)- Mention two compounds, one has intermolecular H-bonding and the other has intramolecular H-bonding, then state which one would have higher boiling point.

2)- State the relation between each of the following pairs either resonance or tautomerism.



3)- Mention Huckel rule for aromaticity then state which of the following compounds is aromatic and which is not?

