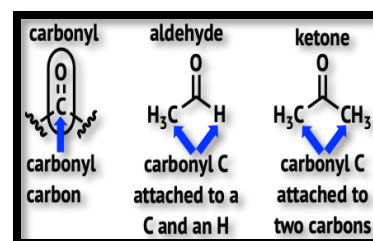


National Institute of Open Schooling

Senior Secondary Course: Chemistry

Chapter- 27 (Aldehydes, Ketones and Carboxylic Acids)

Worksheet-27



1. Methanal (Formaldehyde) is gas at room temperature. It is soluble in water because it is polar. It has pungent smell.

(i) What is formalin? Give its use.

(ii) Which thermoplastics can be made from formalin? Give their uses also.

(iii) Name a medicine prepared from formaldehyde? Give chemical equation and its use.

(iv) What is the problem in using formalin?

2. Arrange the following compounds in an increasing order of their reactivity in nucleophilic addition reactions: ethanal, propanal, propanone, butanone.

3. Give a chemical test to distinguish between Benzoic acid and Phenol.

4. Give the structure and IUPAC name of the product formed when propanone is reacted with methyl magnesium bromide followed by hydrolysis.

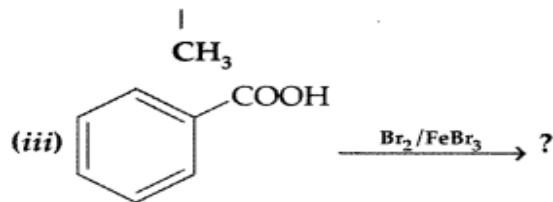
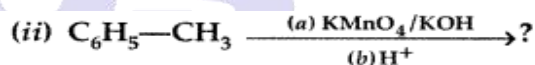
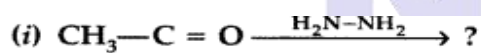
5. Write the reactions involved in the following:

(i) Hell-Volhard Zelinsky reaction

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(ii) Decarboxylation reaction

6. Predict the products of the following reactions :



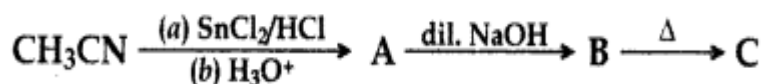
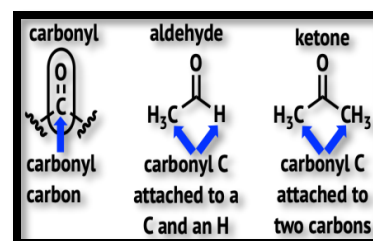
7. Write structures of compounds A, B and C in each of the following reactions:

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8. Do the following conversions in not more than two steps:

(i) Benzoic acid to benzaldehyde

(ii) Ethyl benzene to Benzoic acid

(iii) Propanone to Propene

9. (a) How are the following obtained?

(i) Benzoic acid from ethyl benzene,

(ii) Benzaldehyde from toluene.

(b) Complete each synthesis by giving the missing material, reagent or products:

10. Illustrate the following reactions giving a suitable example for each.

(i) Cross aldol condensation (ii) Decarboxylation

(b) Give simple tests to distinguish between the following pairs of compounds:

(i) Pentan-2-one and Pentan-3-one (ii) Benzaldehyde and Acetophenone

(iii) Phenol and Benzoic acid