ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

SOLUTION-45(CLASS-12)

TOPIC- ALDEHYDE AND KETONE

SUBTOPIC-PREPARATION AND CHEMICAL REACTIONS

SUBJECT – CHEMISTRY **F.M. - 15**

DURATION – 30 mins **DATE -25.07.20**

1.1 **Which of the following has the most acidic hydrogen?**

a) Hexane-2,4-dione b) Hexane-2,3-dione c) Hexane-2,5-dione d) Hexan-3-one

Ans. a

1.2 **A new C-C bond formation is possible in-**

a) Cannizzaro reaction b) Friedel crafts reaction c) Clemmensen reduction d) Reimer-Tiemann reaction

Ans. b and d

1.3 **The formation of cyanohydrin from a ketone is an example of-**

a) Electrophilic addition b) Nucleophilic addition d) Nucleophilic substitution d) Electrophilic substitution

Ans. b

1.4 **Benzoic acid reacts with conc.HNO_3 and conc.H_2SO_4 to give-**

a) o-nitrobenzoic acid b) p-nitrobenzoic acid c) m-nitrobenzoic acid d) o,p-dinitrobenzoic acid

Ans. c

1.5 **An inorganic compound producing an organic compound on heating is-**

a) Ammonium cyanate b) Soda lime c) Sodamide d) Potassium cyanide

Ans. a

1.6 **Reaction of ethyl formate with excess of CH_3MgI followed by hydrolysis gives-**

a) Ethanol b) n-propyl alcohol c) Propanal d) Isopropyl alcohol

Ans. d

1.7 **Formic acid and acetic acid are distinguished by reaction with-**

a) Sodium ethoxide b) Sodium c) $HgCl_2$ d) 2, 4-dinitrophenylhydrazine

Ans. c

1.8 **Heating a mixture of sodium benzoate and soda lime gives-**

a) Calcium benzoate b) Benzene c) Sodium benzoate d) Methane

Ans. b

1.9 **A mixture of benzaldehyde and formaldehyde on heating with aqueous NaOH solution gives-**

a) Benzyl alcohol + Sodium formate b) Sodium benzoate + Methanol c) Benzyl alcohol + Methanol d) Sodium benzoate + Sodium formate

Ans. a

1.10 **Under Wolff-Kishner reduction conditions, the conversions which may be brought about are-**

a) Cyclohexanone into Cyclohexane b) Benzaldehyde into Benzyl alcohol c) Cyclohexanone into Cyclohexanol d) Benzophenone into Diphenyl Methane

Ans. a and d

1.11 **Which of the following IS the most reactive towards participating in nucleophilic addition reaction?**

a) Formaldehyde b) Acetone c) Pentanone d) Butanone

Ans. a

1.12 **The chemical reactions of aldehyde and ketones are governed by-**

a) Steric effect b) Electronic effect c) Both a and b d) None of these

Ans. c

1.13 **The type of chemical interaction that exists within aldehyde and ketone is-**

a) Dipolar interaction b) H-bonding c) Van der waals forces d) None of these

Ans. a

1.14 **Which of the following statements is not correct?**

a) Aldehydes and ketones undergo nucleophilic addition b) Aldehydes and ketones undergo electrophilic substitution c) Aldehydes and ketones contain polar carbonyl group d) Lower members of aldehydes and ketones are soluble in water due to hydrogen bonding

Ans. b

1.15 **Compound 'A' undergoes formation of cyanohydrins which on hydrolysis gives lactic acid ($CH_3CHOHCOOH$). Therefore, compound 'A' is-**

a) Formaldehyde b) Acetaldehyde c) Acetone d) Benzaldehyde

Ans. b

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