ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

FOR GOD AND COUNTRY

WORKSHEET-48(CLASS-12)

TOPIC- ALDEHYDE AND KETONE

SUBTOPIC-PREPARATION AND CHEMICAL REACTIONS

SUBJECT – CHEMISTRY **F.M. - 15**

DURATION – 30 mins **DATE -03.08.20**

1.1 **Which of the following is the best description of the mechanism of the reaction between a ketone and an amine to form an imine?**

a) Concerted bimolecular substitution b) Nucleophilic addition followed by elimination c) Elimination followed by nucleophilic addition d) Electrophilic addition followed by rearrangement

1.2 **Which of the following statement is not true?**

a) Reaction of benzophenone with methanol in the presence of acid gives an acetalb) Reaction of butanal with ethanol in the presence of base gives an acetalc) Reaction of benzaldehyde with ethanol in the presence of acid gives an acetald) Reaction of acetone with methanol in the presence of base gives a hemiacetal

1.3 **Which of the following is a reactive intermediate in the reaction of acetone with bromine in acetic acid to form 1-bromo-2-propanone?**

a) Carbanionb) Enold) Enolated) Radical

1.4 **Compound which doesn't give stereoisomers on treatment with hydroxylamine is-**

a) Benzaldehyde b) Acetophenonec) Benzophenone d) 2-Butanone

1.5 **Hydroxylaminereacts with aldehyde or ketone to form-**

a) Imineb) Ureac) Amided) Oxime

1.6**Reaction of ethanoic anhydride with limited supply of CH_3MgI, in presence of dry ether followed by hydrolysis gives-**

a) Acetoneb) n-propyl alcohol c) Acetaldehyde d) Isopropyl alcohol

1.7 **Aldehyde can be chemical distinguished from ketone by-**

a) Tollens reagent b) Sodium bisulphite addition c) Brady's reagent d) All of these

1.8 **Ketone on treatment with Copper at 573Kforms-**

a) Carboxylic acidb) Ether c) Alkene d) alkyne

1.9 **A strong base can abstract an alpha-hydrogen from –**

a) Amine b) Both c and dc) Ketoned) Ether

1.10 **Reduction of aldehydes and ketones into hydrocarbons using Hydrazine, KOH and under heating condition (180^{o}C), in presence of Ethylene glycol -**

a) Cope reduction b) Huang Menlon Synthesisc) Wolff-Kishner reduction d) Clemmensen reduction

1.11 **Cyclopropanone forms stable geminal-di-ol, due to-**

a) Inter molecular H-bond formation b) Due to release in angle strainc) Inductive effect d) Hyperconjugation

1.12**A $C_5H_{12}O$ compound is optically active, and is oxidized by PCC in CH_2Cl_2 to an optically active $C_5H_{10}O$ product, which is racemised in acid or base. Which of the following best fits these facts-**

a) 2-pentanol b) 2-methoxy butane c) 2-methyl-1-butanol d) 3-methyl-1-butanol

1.13**Phenyl hydrazine on treatment with Aldehyde forms-**

a) 2.4-DNPHb) Oximec) Semicarbazone d) Phenyl hydrazone

1.14**Aldehyde and ketone both undergo the type of chemical reaction/reactions-**

a) Condensation b) rearrangementc) additiond) all of these

1.15 **Which of the following compounds would not be a possible product form the mixed aldol reaction of acetaldehyde and butanal?**

a) 3-hydroxybutanalb) 2-ethyl-3-hydroxybtanal c) 3-ethyl-2-hydroxyhexanal d) 3-hydroxyhexanal

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