

ST. LAWRENCE HIGH SCHOOL

A JESUIT CHRISTIAN MINORITY INSTITUTION

WORKSHEET-47(CLASS-12) TOPIC- ALDEHYDE AND KETONE

## **SUBTOPIC-PREPARATION AND CHEMICAL REACTIONS**



SUBJECT – CHEMISTRY DURATION – 30 mins

F.M. - 15 DATE -01.08.20

## 1.1 During the nucleophilic addition reaction of an aldehyde or Ketone the change in hybridization state of the carbonyl atom changes-

a) sp<sup>2</sup> to sp<sup>3</sup> b) sp<sup>3</sup> to sp<sup>2</sup> c) sp<sup>2</sup> to sp d) sp to sp<sup>3</sup>

#### Ans. a

## 1.2 Wolff Kishner reduction of a ketone is carried out in the presence of which of the following?

a)  $H_2$  and Pt as catalyst b) Glycol with KOH c) Zn-Hg with HCld) LiAlH<sub>4</sub>

### Ans. b

## 1.3 The factor/factors that affect the rate of a chemical reaction of an aldehyde or a ketone is / are-

a) Electronic effectb) steric effectc) both a and bd) none of these

## Ans. c

## 1.4 The hydration of an aldehyde or a ketone is reversible due to-

a) Slowest step b) Formation of geminal di ol c) Formation of vicinal di old) Tautomerism

Ans. b

### 1.5 Ammonia reacts with aldehyde or ketone to form-

a) Imineb) Ureac) Amided) Amine

### Ans. a

## 1.6 Reaction of ethyl ethanote with limited supply of CH $_3$ MgI followed by hydrolysis gives-

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

## Ans. c

## 1.7 Both aldehyde and ketone can be identified by-

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

Ans. d

## 1.8 Aldehyde and ketone are reduced to form-

a) Alcohol b) Ether c) Alkane d) alkyne

Ans. a

## $1.9~{\rm A}$ strong base can abstract an alpha-hydrogen from –

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

### Ans. c

# 1.10 Reduction of aldehydes and ketones into hydrocarbons using Hydrazine, KOH and u der heating condition-

a) Cope reduction b) Dow reductionc) Wolff-Kishner reduction d) Clemmensen reduction

#### Ans. c

#### 1.11 Chloral forms stable geminal-di-ol, due to-

a) Inter molecular H-bond formation b) Intra molecular H-bond formationc) Inductive effect

d) Hyperconjugation

#### Ans. b

#### 1.12Aldehydes are chemically more reactive than the ketones due to-

a) Electrophilic character at the carbonyl carbon b) Steric factor c) both a and b d) none of these **Ans. c** 

#### 1.13Semicarbazide on treatment with Aldehyde forms-

a) Salicyldehydeb) Semicarbazenec) Semicarbazone d) Semicarbazyne

Ans. c

## 1.14 aldehyde and ketone both undergo the type of chemical reaction/reactions-

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

Ans. d

### 1.15The geometry of the carbonyl group is-

a) Trigonal planar b) Pyramidal c) Square planer d) Linear

Ans. a

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