Date: 04-12 2024

LGS GROUP OF COLLEGES

MONTHLY TEST #3 CHEMISTRY XII M#3

M

MT3

Paper Code:1908	Name: ……	Roll No:
TOPIC: CH# 12	Objective + Subjective	Marks =35, Time: 1 HOUR

SECTION-I OBJECTIVE TYPE (TIME 10 MINUTES)

Note: Four possible answers A, B, ,C and D to each question are given. The choice which you think is correct, fill the circle in front of that question with Marker or Pen ink in the answer book. Cutting or filling two or more circles will result in zero mark in that question. (1x11=11)

i. Addition of alcohol in carbonyl compounds gives acetal. The geometry of acetal is:

A) Linear B) Trigonal

C) Tetrahedral D) Planer

ii. Methanol can be prepared from hydrogenation of:

A) CH_3N B) CH_3Br

C) HCHO D) CH_3CHO

iii. Which of the following reagent will react with both aldehydes and ketones:

A) Grignard Reagent B) Tollen's Reagent

C) Fehling's Reagent D) Benedict's Reagent

iv. Which compound will react with Tollen's reagent:

A) Acetaldehyde B) Acetone

C) Acetic acid D) Butanone

v. The carbon atom of a carbonyl group is:

A) sp-hybridized B) sp^2 -hybridized

C) sp^3 -hybridized D) sp-sp hybridized

vi. Formaline is:

A) 10% solution of formaldehyde in water B) 20% solution of formaldehyde in water

C) 40% solution of formaldehyde in water D) 60% solution of formaldehyde in water

vii. Acetone reacts with HCN to form a cyanohydrin. It is an example of:

A) Nuclecphilic addition B) Substitution reaction

C) Elimination reaction D) None

viii. Ketones are prepared by the oxidation of:

A) Primary alcohol B) Secondary alcohol

C) Tertiary alcohol D) Polyhydric alcohol

ix. Aldehydes and ketones can be detected by:

A) 2,4 DNP teat B) Tollen's test

C) Sodium Nitro pruside Test D) Benedict's solution test

x. Silver mirror test is given by:

A) Ethers B) Ketones

C) Acids D) Aldehydes

xi. Aldehydes react with hydroxylamine in acidic solution to give:

A) An oxime B) Aldol

C) Polymer D) Acetic acid

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Part – I

Q2. Write short answers of following questions. (8x2=16)

i. Write down four uses of acetaldehyde.
ii. Write Fehling's solution test
iii. Explain one method of formation of formaldehyde from methyl alcohol.
iv. Write the reaction of iodoform by using acetone?
v. Describe brifly the mechanism of base catalyzed nucleophilic addition to a carbonyl compound?
vi. Write the reaction of phenyl hydrazine with acetaldehyde?
vii. Convert acetaldehyde into paraldehyde by a reaction which is done in presence of dilute H_2SO_4?
viii. How α-hydroxy acids are produced from aldehyde and ketones?
ix. How would you convert Acetone into t-butyl alcohol?
x. Distinguish between ethanol and propanon by a chemical test.
xi. How methanol and ethanol are reduced with sodium Borohydride?
xii. Apply your knowledge to convert formaldehyde into ethyl alcohol?

SECTION – II (8 marks)

Attempt Any one Questions.

Q3(a) Describes the mechanism of Aldol condensation. And give example.

(b) Describes the mechanism of Ammonium derivatives.

Q4(a) What type of aldehyde gives cannizar's reaction? Give its mechanism.

b) Describes the mechanism of the reaction of sodium bisulphite ($NaHSO_3$) with aldehyde and ketone. And give its one example