



LGS GROUP OF COLLEGES

A PROJECT OF LAHORE GRAMMAR SCHOOL

Sheet # _____

Name: Eman Sajid
Subject: Chemistry

Class: 2nd year Roll No. 230108
Test No. W-8 Date: _____

TEST NO. _____ Date: _____				Marks Obtained
A	B	C	D	
1	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
2	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
3	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
4	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
5	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	
6	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
7	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
8	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
9	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
10	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
11	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	
12	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
13	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
14	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
15	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
16	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
17	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
18	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
19	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	
20	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

Subjective type

Short Answer

(I)

Tollen's test is also silver mirror test.

Aldehydes form silver mirror with Tollen's reagent (ammoniacal silver nitrate solution.)
Add Tollen's reagent to any aldehyde sol. and in a test tube and warm. A silver mirror is form on the inside of the test tube.

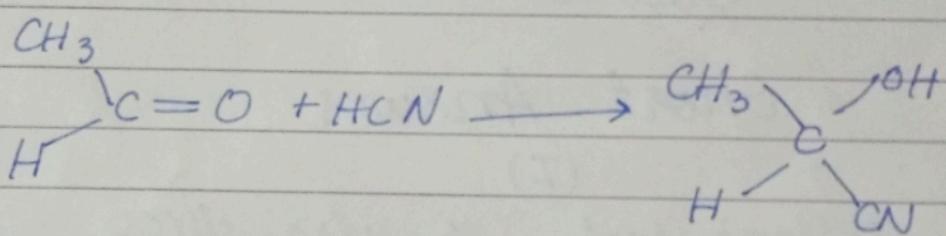
(II)

Iodoform Test:

The haloform reaction using iodine and aqueous sodium hydroxide is called the Iodoform test. It results in the formation of water insoluble iodoform which is a yellow solid. Acetaldehyde gives iodoform test while formaldehyde no

Acetaldehyde with HCNs

Hydrogen cyanide adds to aldehydes and ketones to form cyanohydrins. The reaction is carried out by adding slowly a mineral acid to an aqueous sol. of sodium cyanide. The acid generates HCN from sodium cyanide *in situ*.



Long Answer

Question 3

Cannizzaro's Reaction:

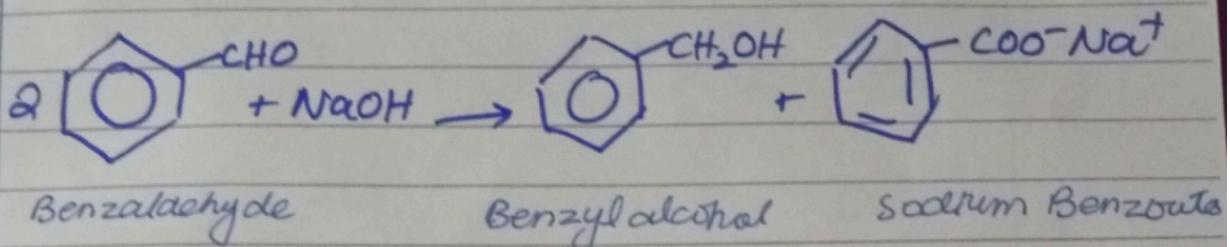
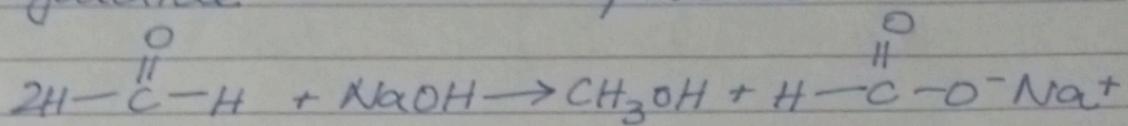
Aldehydes that have no α -hydrogen atoms undergo Cannizzaro's reaction.

It is a disproportionation (self-oxidation-reduction). Two molecules of aldehyde are involved, one molecule being converted into the corresponding alcohol (the reduced product) and the other into the acid in the salt form (the oxidation product).

The reaction is carried out with 50 percent aq. solution of sodium

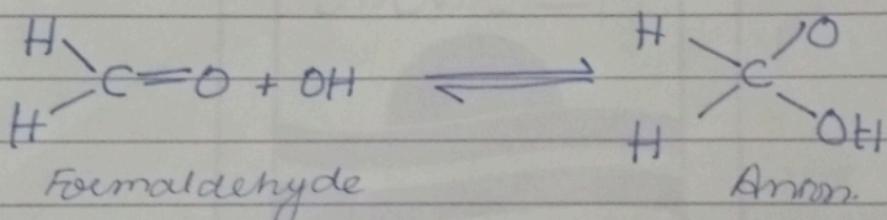
Student Name: _____

hydroxide at room temperature.

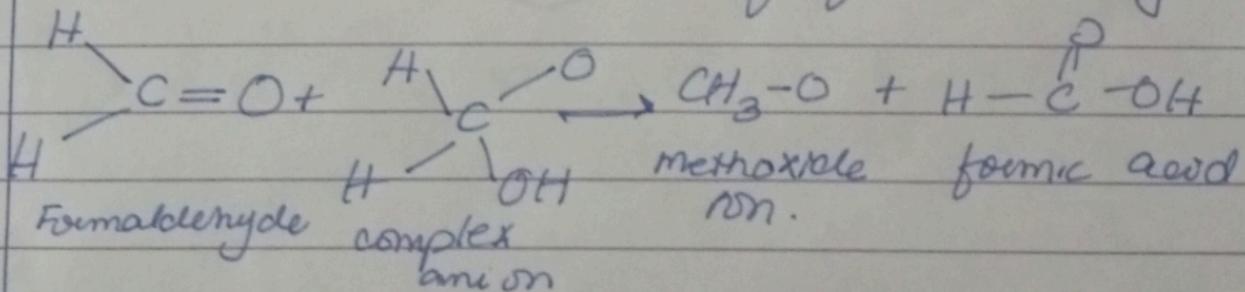


Mechanisms

The hydroxide ion acts as a nucleophile. It attacks on the electrophilic carbonyl carbon to form a complex anion.

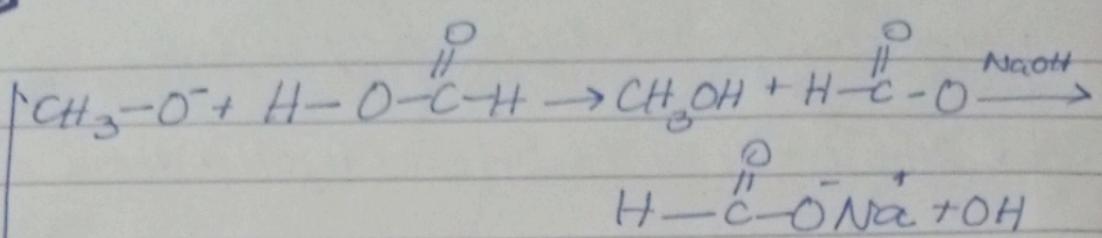


The anion transfers a hydride ion to second molecule of formaldehyde.



The presence of negative charge on oxygen of the anion helps in the less of hydrolysis reaction.

The methoxide ion acts as a base and abstracts a proton from formic acid to form methanol and formate ions.



The formate ion in the presence of alkali gives a salt the acid.