

March 2010

27

Saturday

Day 086 - 279 week 13

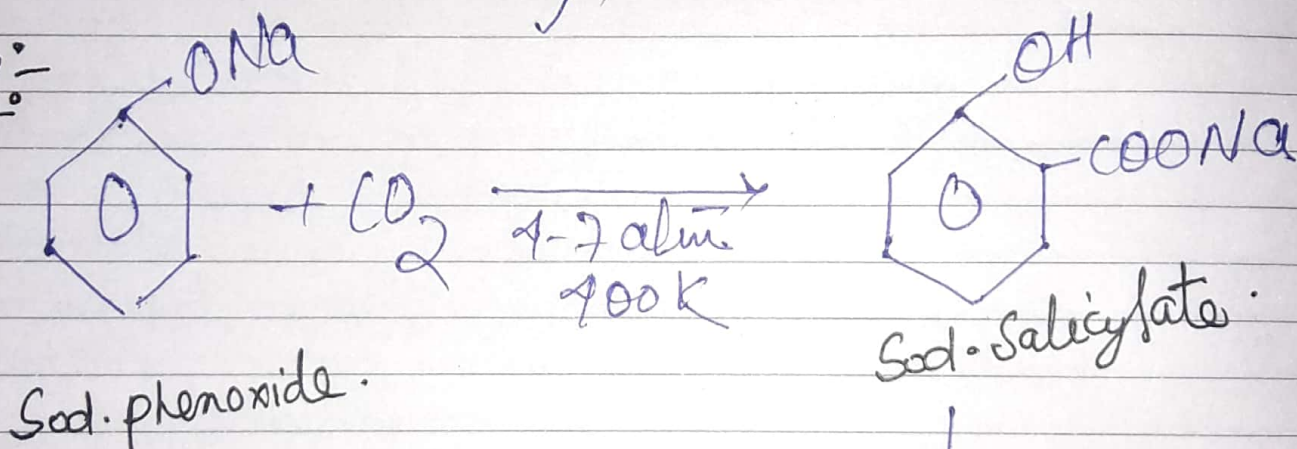
APRIL 2010

S	M	T	W	T	F	S	S	M	T	W	T	F	S
						1	2	3	4	5	6	7	8
11	12	13	14	15	16	17	18	19	20	21	22	23	24
25	26	27	28	29	30								

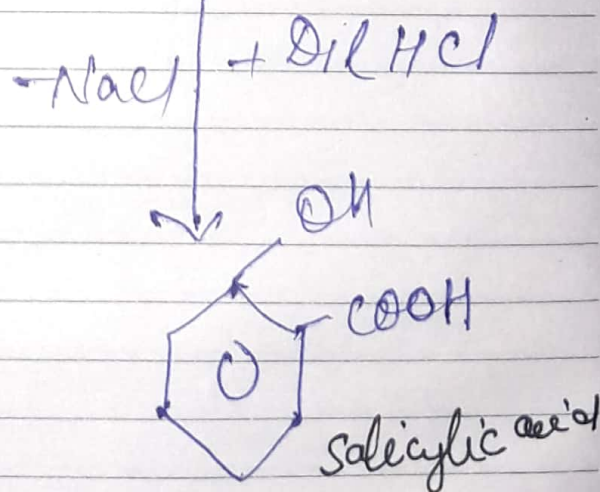
Alcohol & Phenol.

① Mechanism of Kolbe's Reaction (Kolbe's Schmitt Reaction)

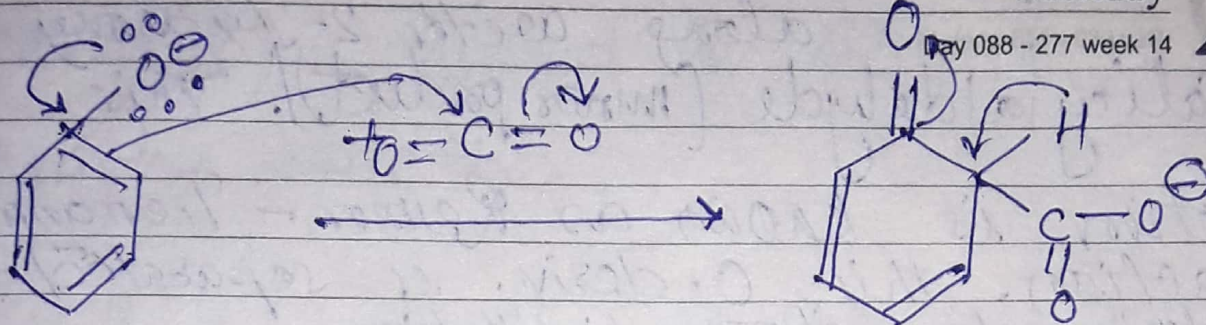
Theory:-



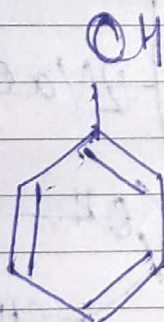
28 Sunday



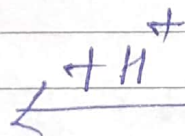
It is a Electrophillic substitution reaction which is involved the electrophillic attack by CO₂ on the phenoxide ion, represented by intermediate formation salicylate ion.



phenoxide
ion



salicylic
acid



salicylate ion

② Mechanism of Reimer - Tiemann reaction

When phenol is heated with chloroform in presence of aqueous NaOH sol at 340K and followed by hydrolysis we get 2-hydroxy salicylaldehyde, and 4-hydroxy (major)

March 2010

APRIL 2010
S M T W T F S S M T W T F S

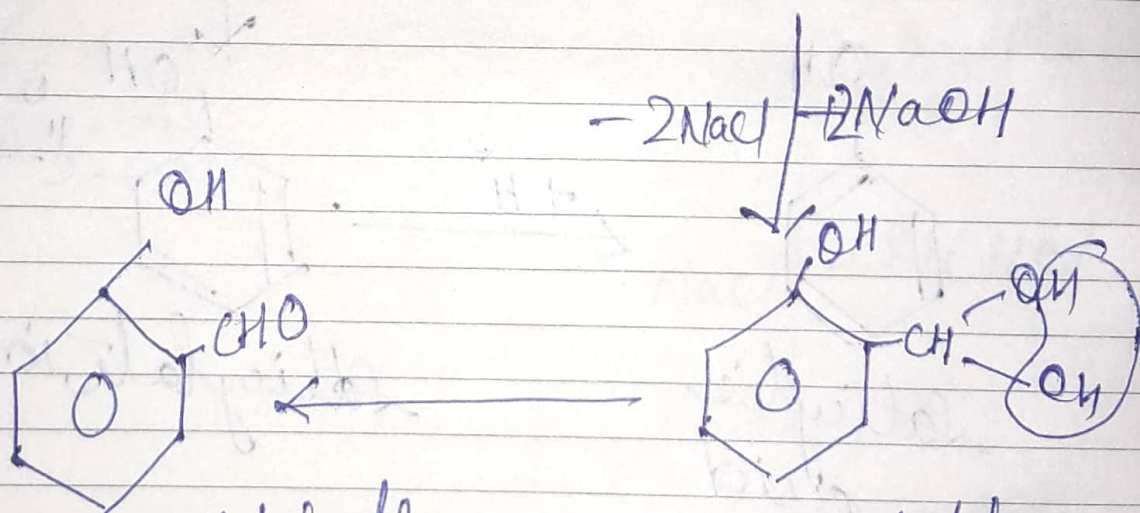
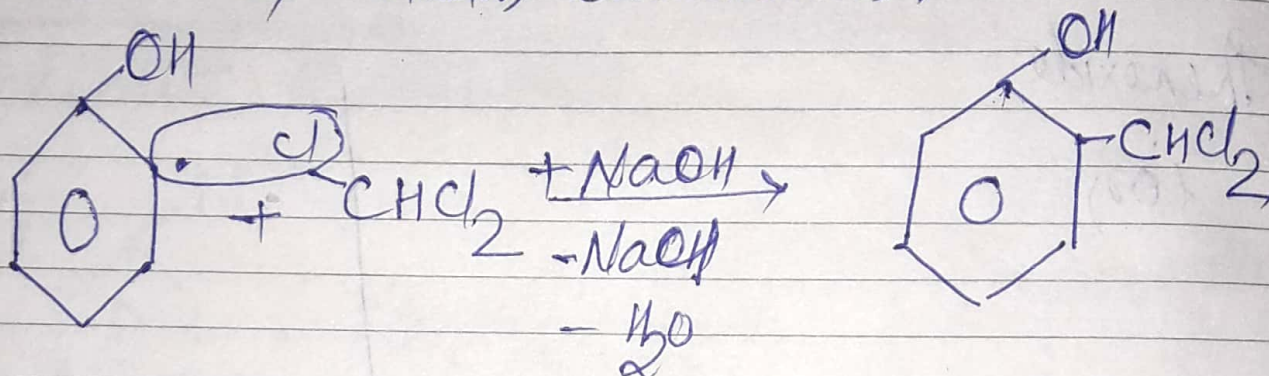
30

Tuesday

Day 089 - 276 week 14

1 2 3 4 5 6 7 8 9 10
11 12 13 14 15 16 17 18 19 20 21 22 23 24
25 26 27 28 29 30

along with 2-hydroxy [Salicylaldehyde (minor product)]. This reaction is known as Reimer-Tiemann reaction. This O-deriv. is separated from p-deriv. by steam distillation.

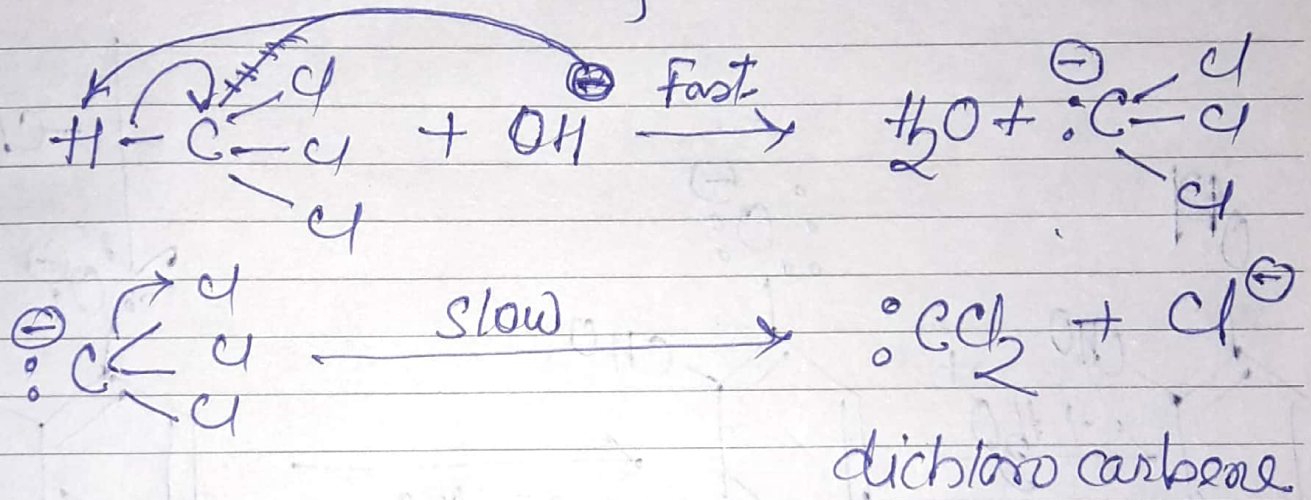


Salicylaldehyde or 2-hydroxy benzaldehyde unstable

Mechanism of the reaction :- This is an electrophillic substitution reaction, for which the electrophile :CCl_2 = Dichloro

carbene) is formed by the following reaction,

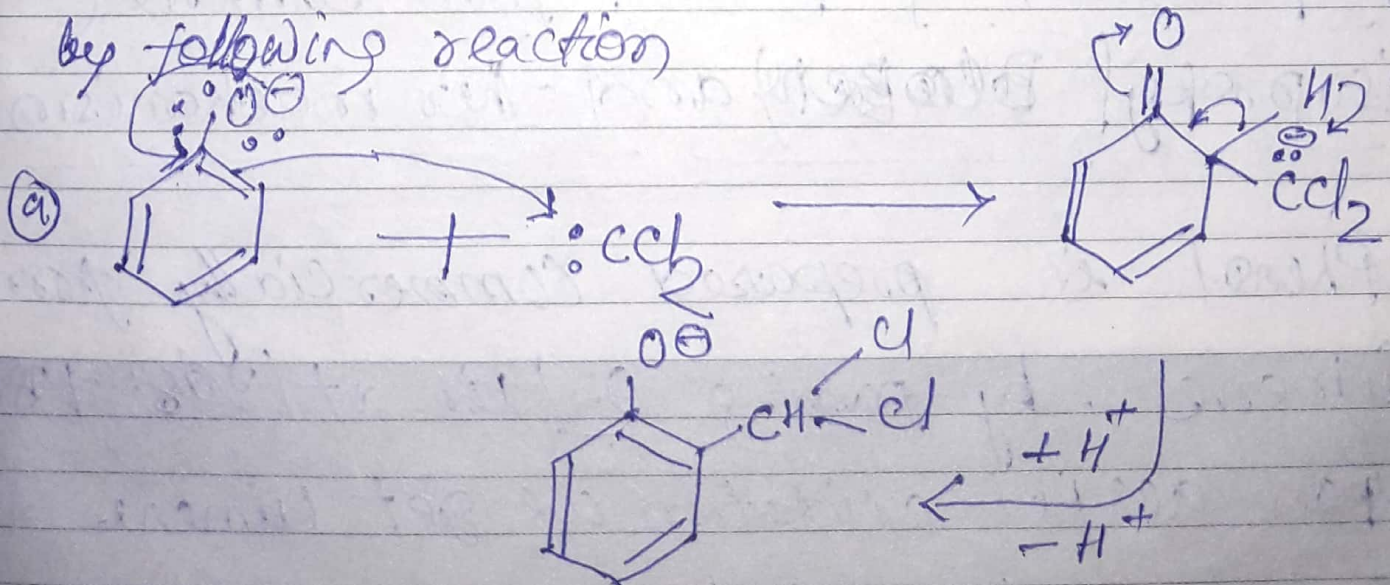
Step I - Formation of Dichlorocarbene



Step - II

This di-chloro carbene react with

phenoxide ion forming Benzal derivative by following reaction

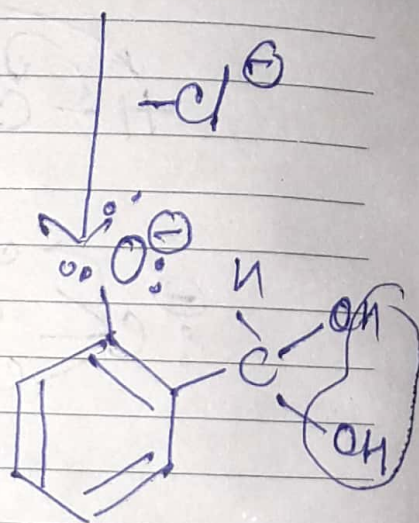
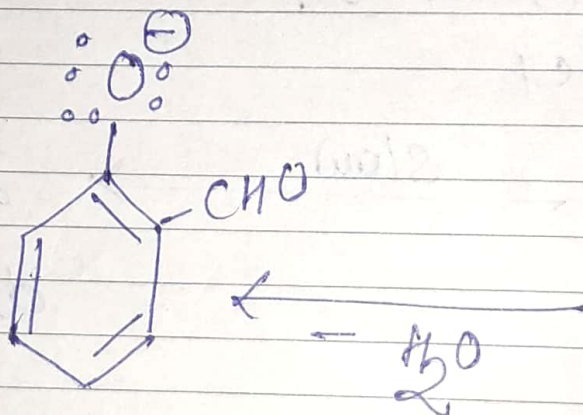
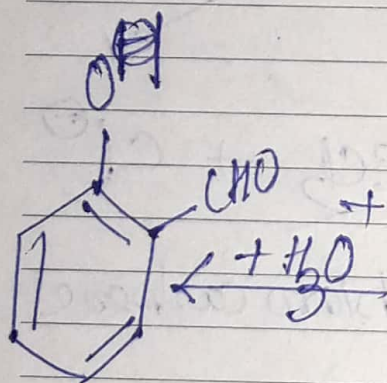
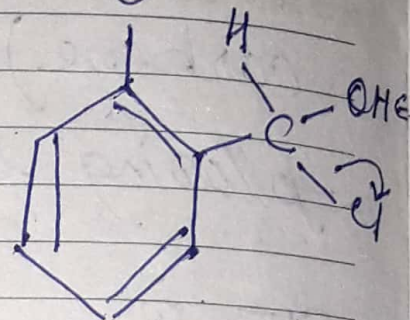
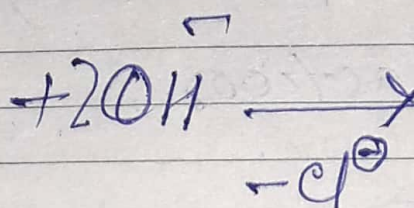
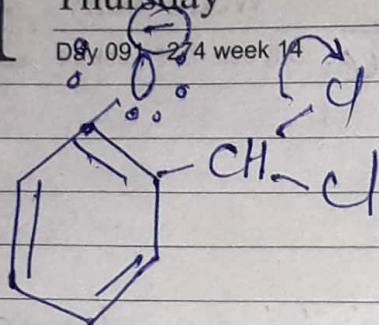


April 2010

01 Step-III
Thursday

Day 09 / 274 week 14

MAY 2010						
S	M	T	W	T	F	S
						1
9	10	11	12	13	14	15
23	24	25	26	27	28	29



Salicylaldehyde.

Unstable