

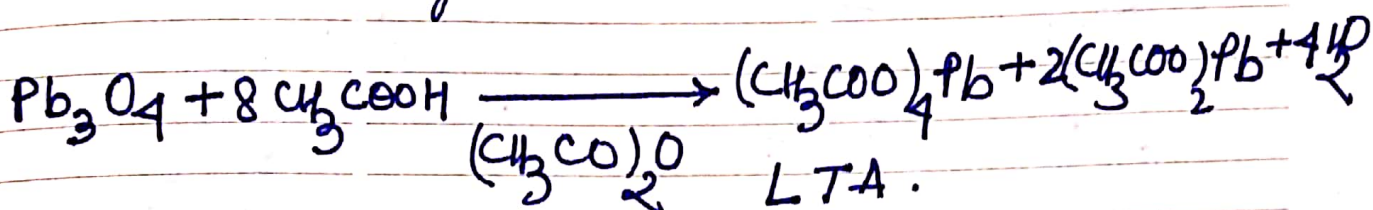
5 Thursday

6 Friday

7 Saturday

5. Lead tetra acetate. $(CH_3COO)_4Pb$

Preparation: - It is prepared easily by the gradual addition of red lead (Pb_3O_4) to a mixture of acetic acid and acetic anhydride at $50-80^\circ C$. due to the following reaction, we get LTA.



Application: - When LTA is boiled with glacial acetic acid, it gives lead acetate and free acetoxy radical ($CH_3COO\cdot$). This acetoxy radical can either be trapped the substrate to give acetoxylation reaction or abstract hydrogen from the substrate to give oxidation reaction.

Similarly a part of the acetoxy radical can be also decomposed to generate methyl free radical ($\cdot CH_3$), that can either be trapped by substrate for methylation or it can abstract hydrogen from the substrate to perform oxidation reaction.

This can be represented by the following Hence LTA is mainly used for three types of reaction.

(a) Oxidation

(b) Acetoxylation

(c) Methylation

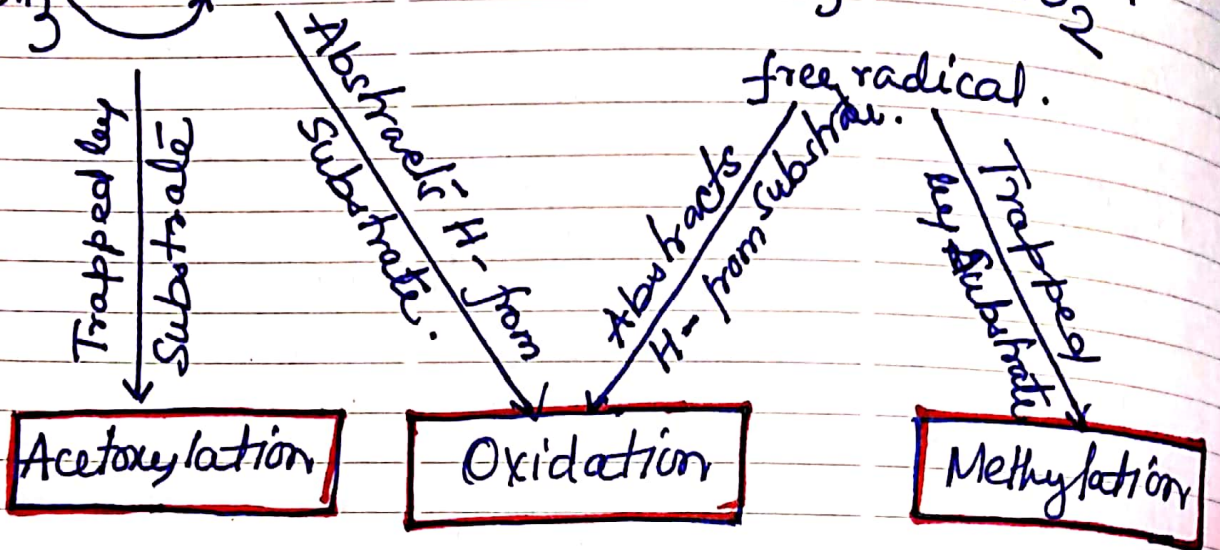
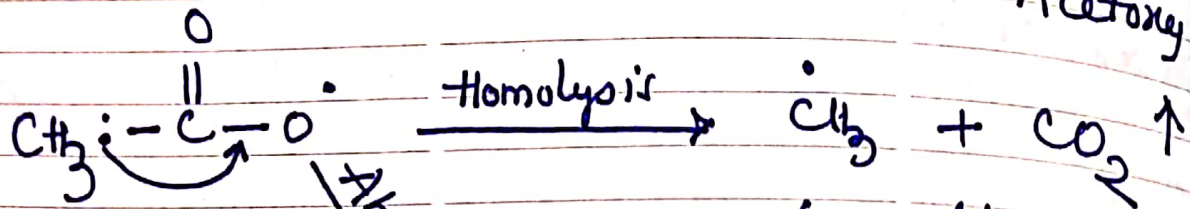
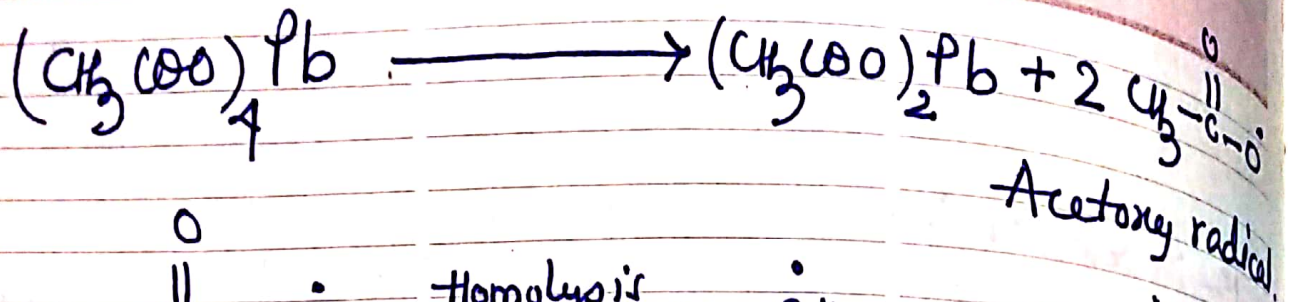
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					1	2	30	31				1	-	1	2	3	4	5		
4	5	6	7	8	9	10	2	3	4	5	6	7	8	6	7	8	9	10	11	12
11	12	13	14	15	16	17	9	10	11	12	13	14	15	13	14	15	16	17	18	19
18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30			

May 2016

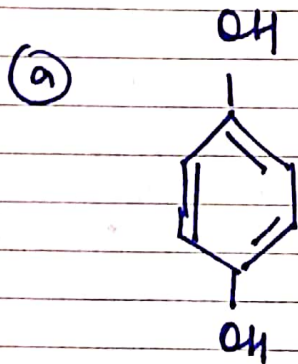
9 Monday

10 Tuesday

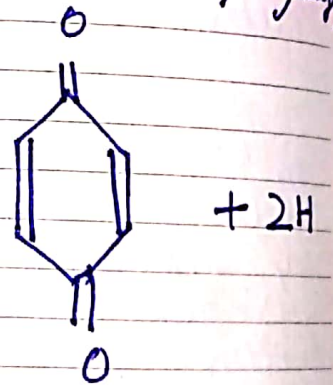
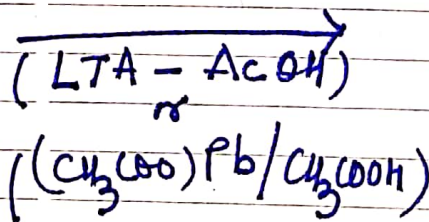
11 Wednesday



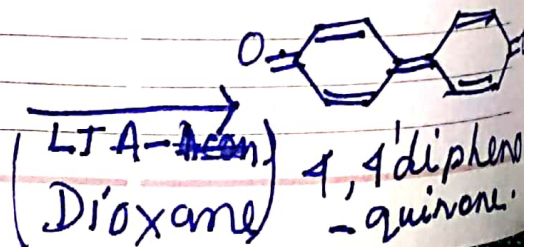
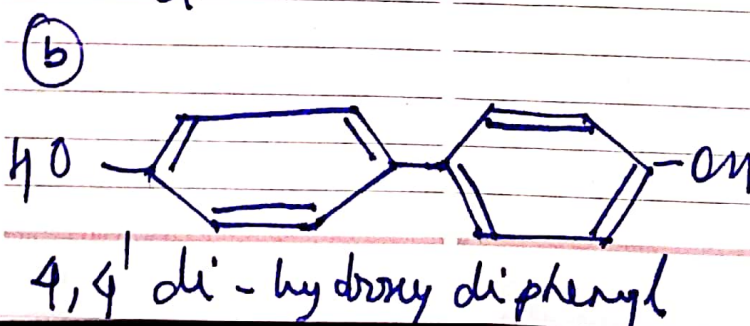
① As an oxidising agent:- (Take away Hydrogen)



Quinol



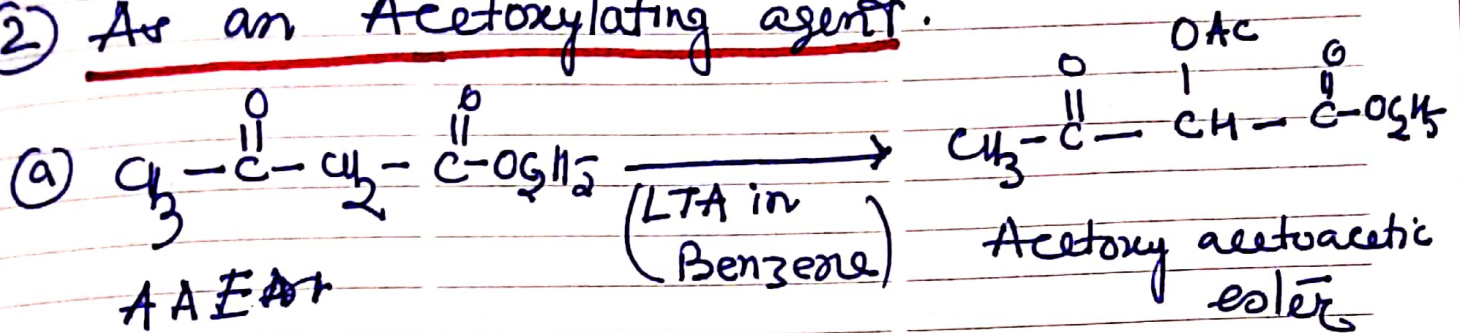
p-quinone



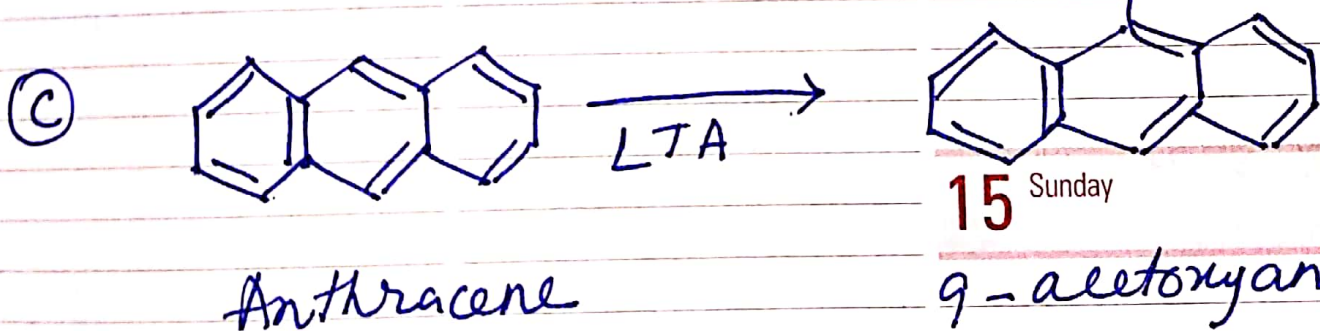
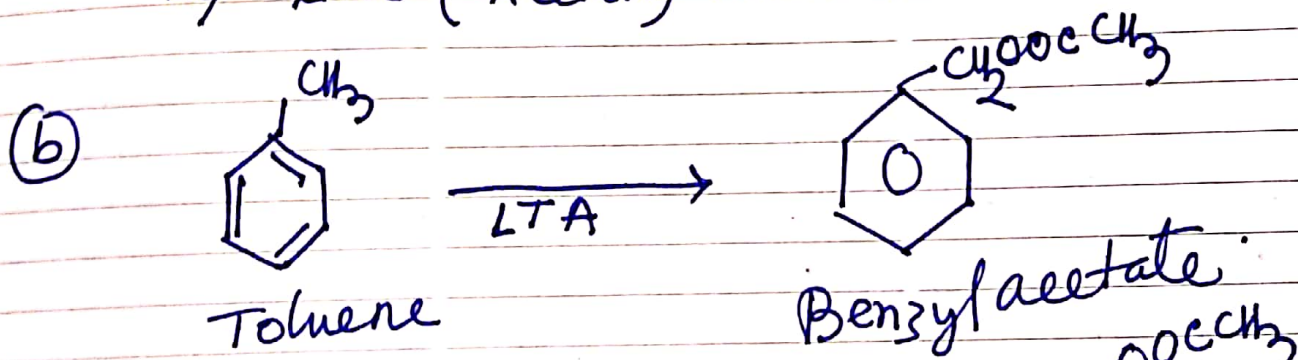
12 Thursday

13 Friday

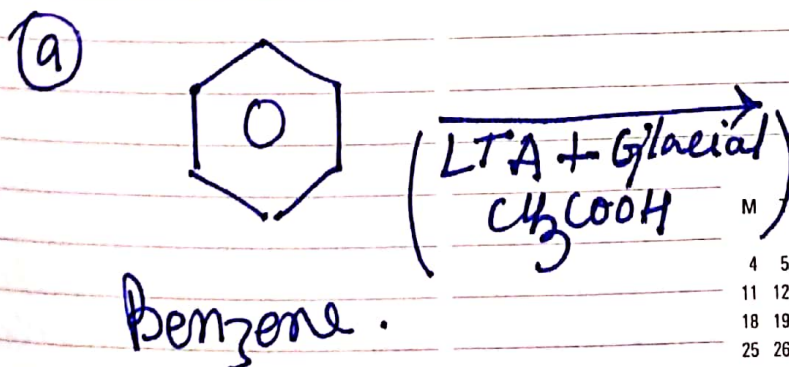
14 Saturday

(2) As an Acetoxylation agent.

Here active hydrogen undergoes displacement by OAc (Acetoxy radical).



15 Sunday

(3) As methylating agent.

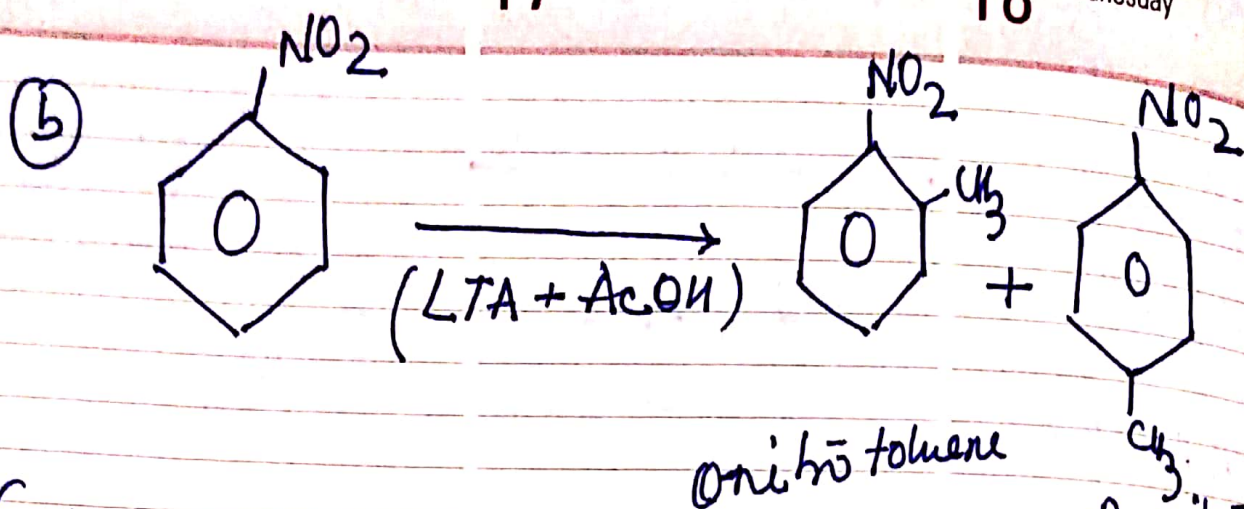
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May 2016

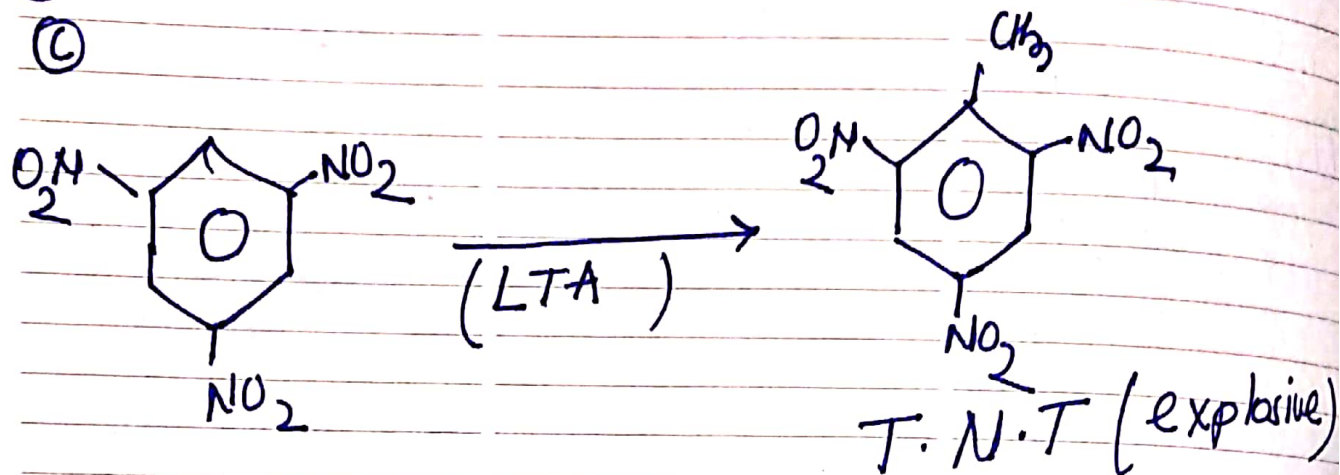
16 Monday

17 Tuesday

18 Wednesday



(N.B.: Showing o & p attack of methyl radical)



1,3,5 trinitro benzene.