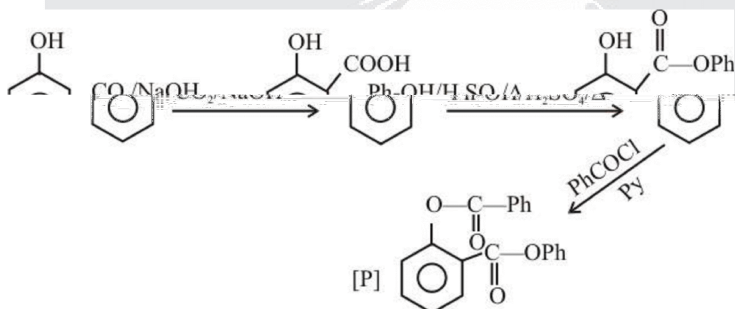


Answer Key

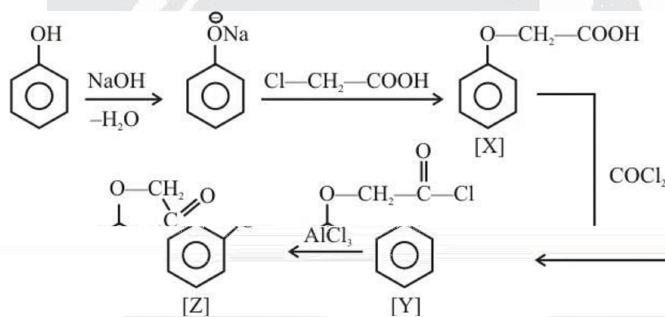
1. (C)	2. (C)	3. (C)	4. (D)	5. (B)
6. (C)	7. (B)	8. (ABC)	9. (ACD)	10. (AC)
11. (BCD)	12. (B)	13. (A)	14. (C)	15. (3)
16. (002)	17. (A)	18. (A)		

Solution

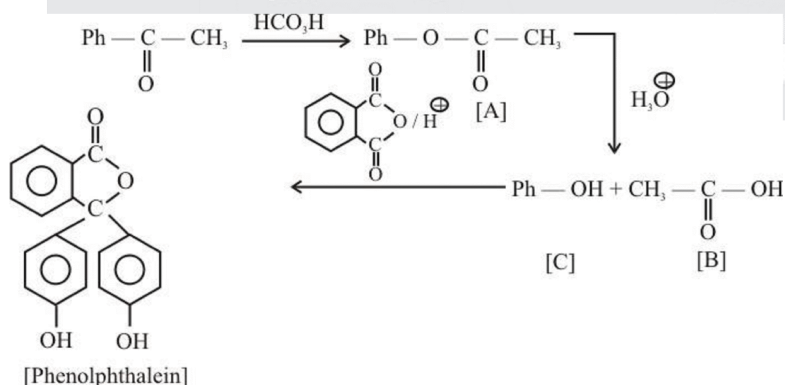
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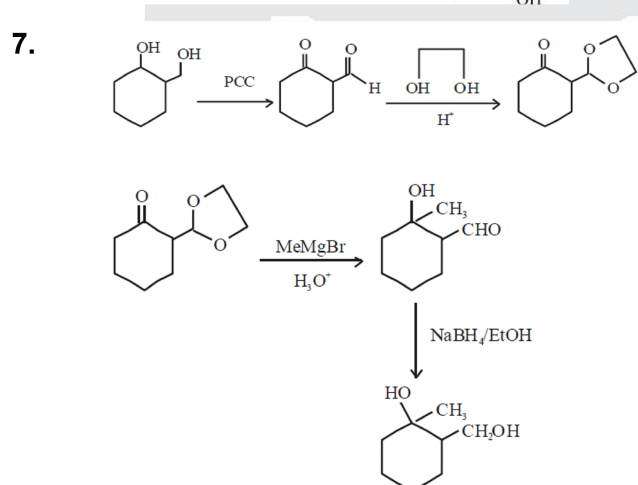
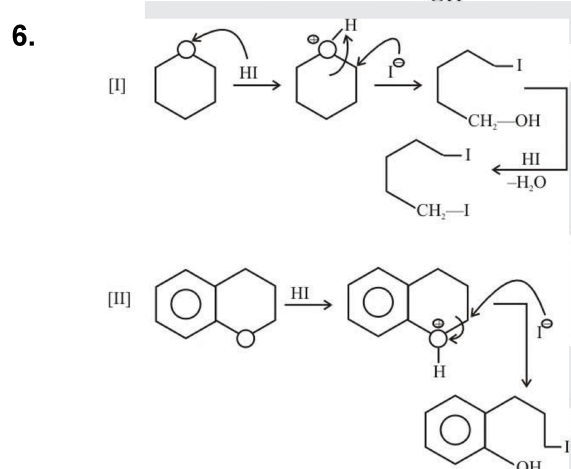
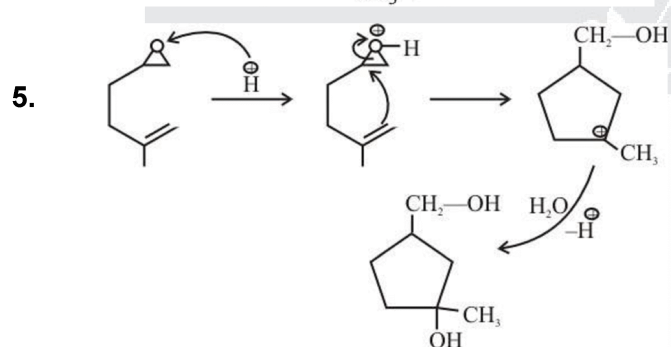
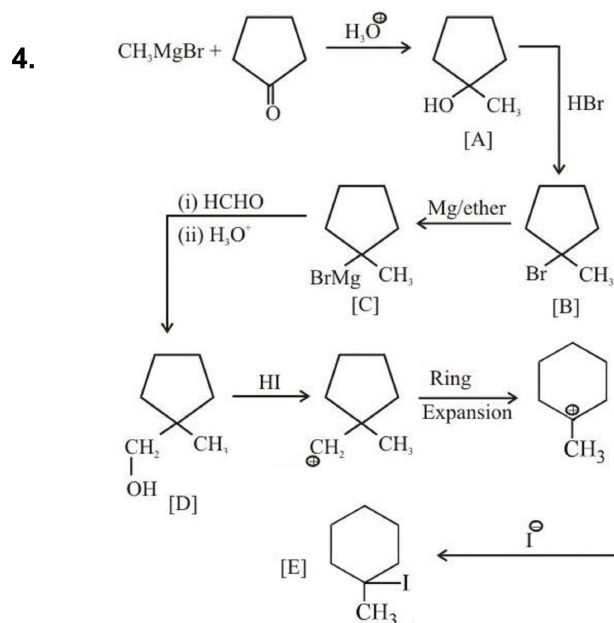


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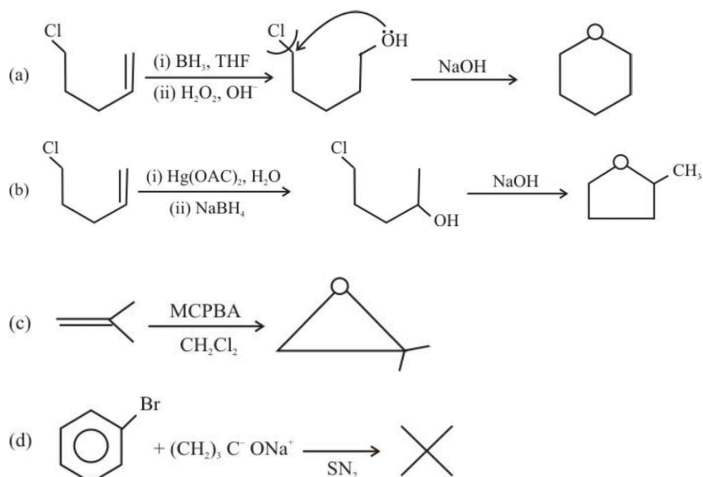


3.





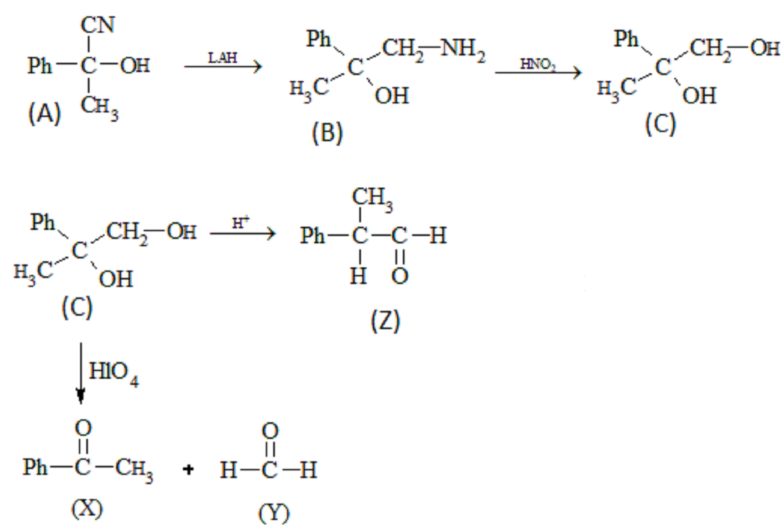
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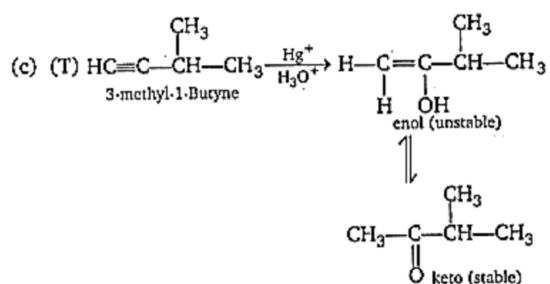
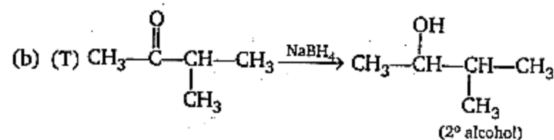
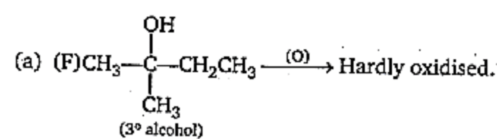
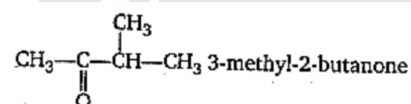
9. MnO_2 is a mild oxidizing agent and selectively reduces Primary or secondary allylic or benzylic alcohols.

In option (b), the alcohol is tertiary allylic alcohol. Thus it is not reduced using MnO_2

10.

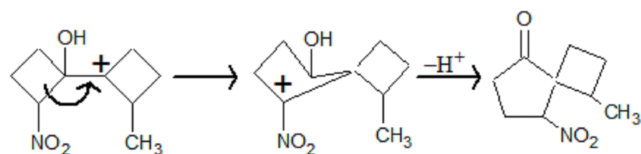


11.

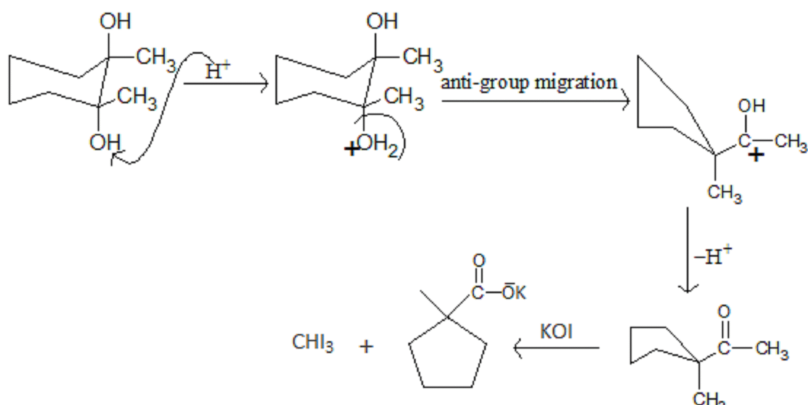


(D) (True) Both the compounds have molecular formula as $\text{C}_5\text{H}_{10}\text{O}$

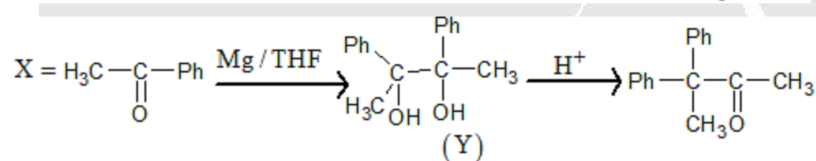
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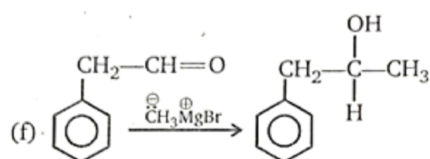
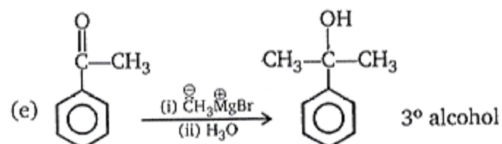
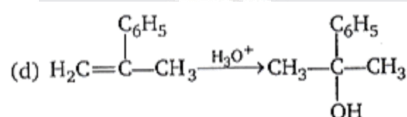
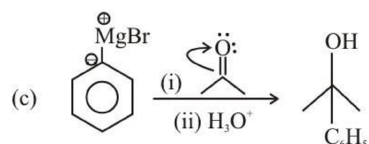
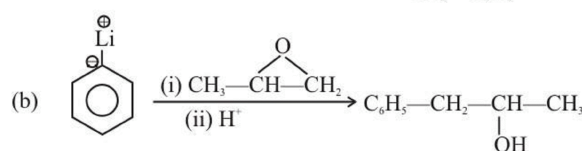
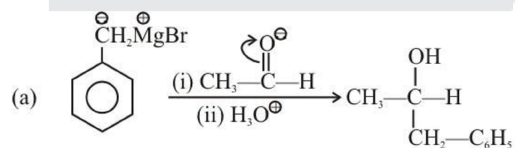
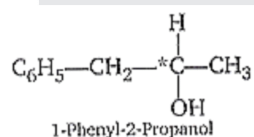
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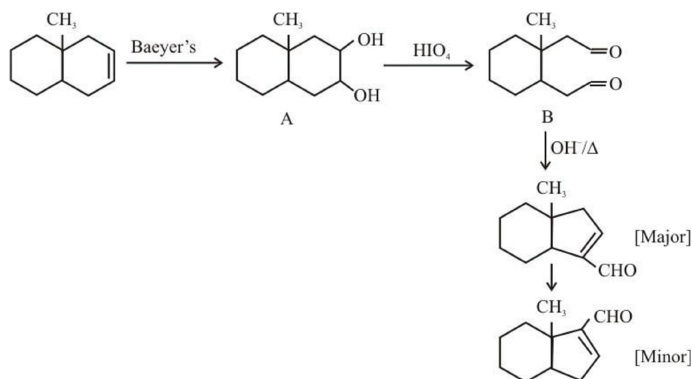
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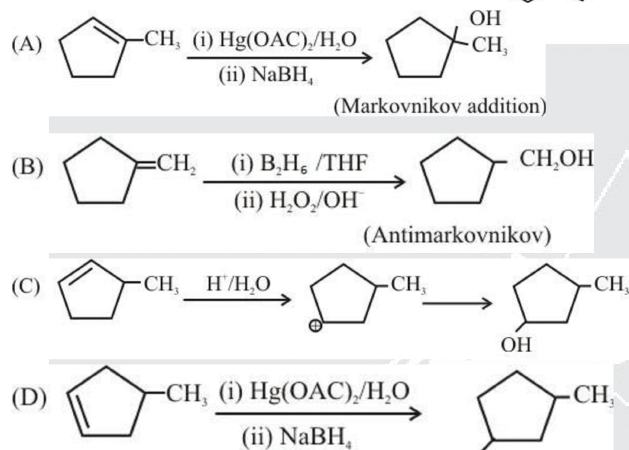
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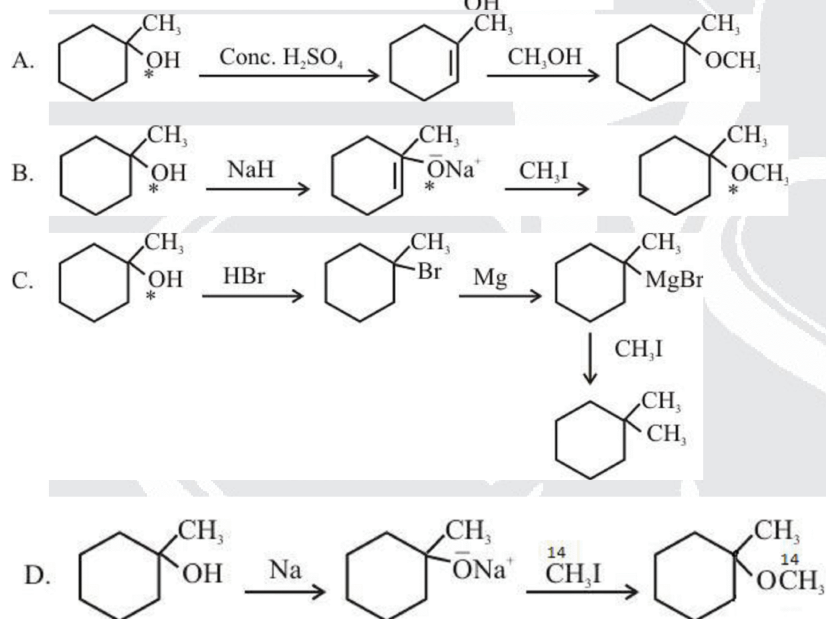
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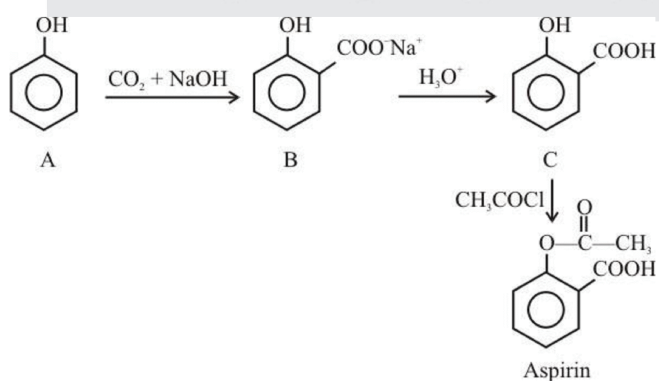
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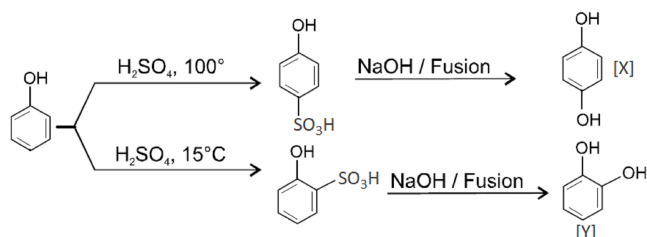
18.



19.

(I) Phenol gives a characteristic violet colour with FeCl_3 .

20.



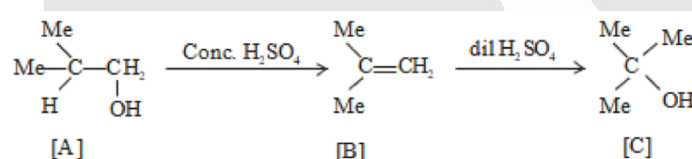
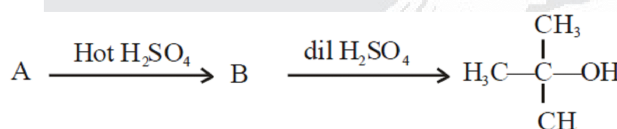
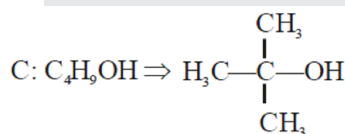
At high temperatures thermodynamically favoured para product is formed whereas at low temperatures kinetically favoured ortho product is formed.

21.

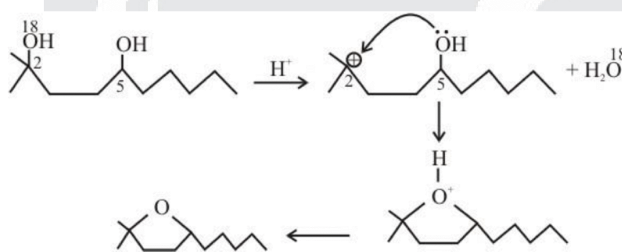
Reacts rapidly with sodium $\Rightarrow$ alcohol

Low reaction with Lucas reagent $\Rightarrow$ 1° Alcohol

Compound (c) $\text{C}_4\text{H}_9\text{OH}$ is very less reactive to sodium but rapidly reacts with Lucas reagent $\Rightarrow$ 3° alcohol.



22.

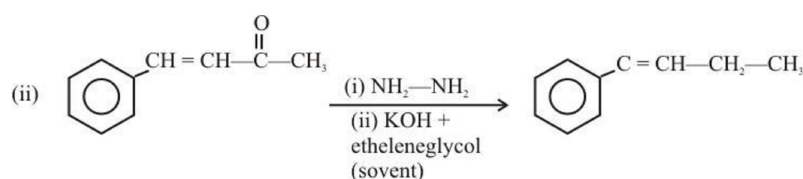
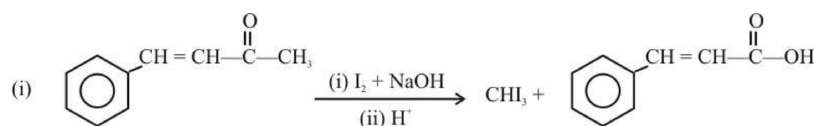


23.

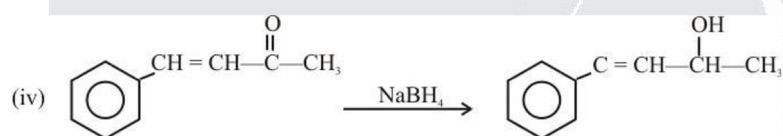
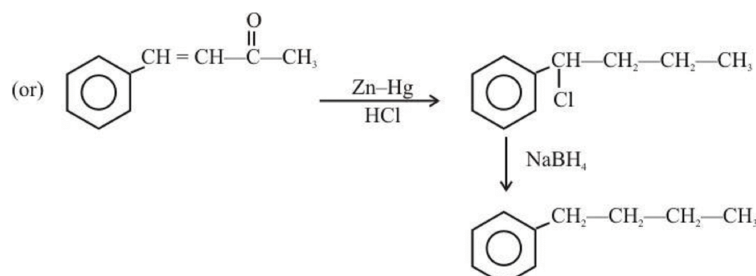
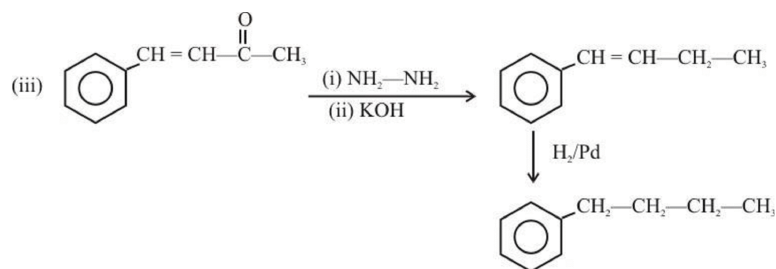
(I) (i) $\text{I}_2 + \text{NaOH}$ (ii) H^+ , (II) $\text{N}_2\text{H}_4 + \text{KOH}$,

(III) $\text{N}_2\text{H}_4 + \text{KOH}$ or (i) Zn-Hg/HCl (ii) NaBH_4

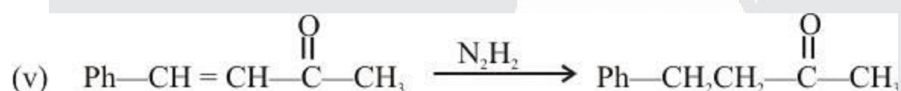
(IV) NaBH_4 (V) N_2H_2



Using wold Kishner reaction we can prevent the reduction of double bond.



Note: We can't use LiAlH_4 because if double bond is in between $\text{C}=\text{O}$ and 'Ph' group, it reduces double bond also.



Diimide (N_2H_2) selectively reduces alkenes and alkyne. It doesn't effect $>\text{C}=\text{O}$.