

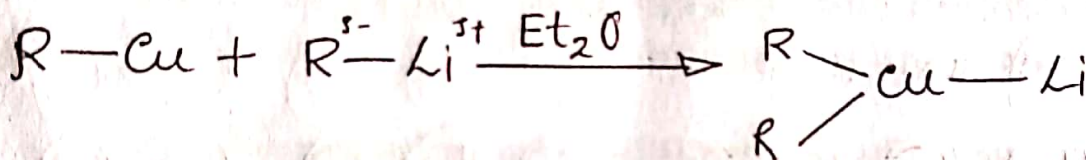
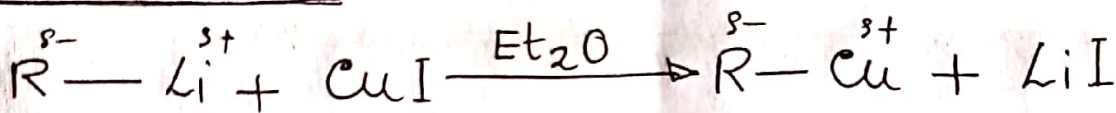
# Reagent Chemistry (1)

## R<sub>2</sub>CuLi

~ (Lithium dialkyl cuprate)

eg.  $\text{Me}_2\text{CuLi} \rightarrow$  Lithium dimethyl cuprate  
(Also known as Gilman Reagent)

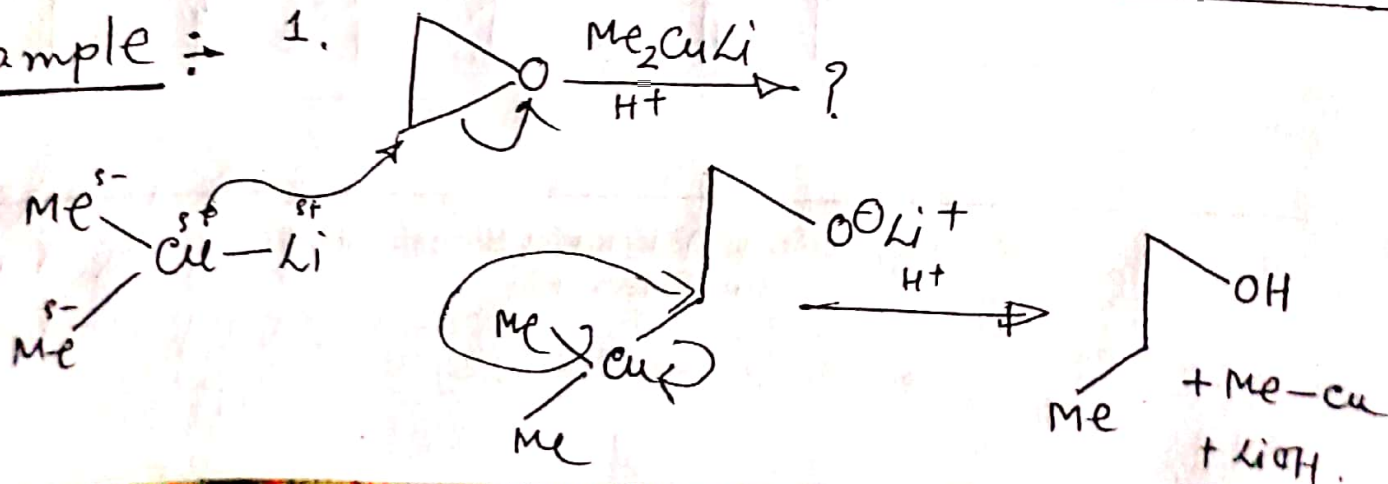
### Preparation:

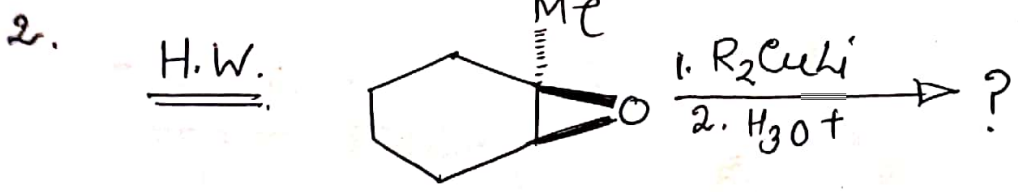


In ether solution  $\text{Me}_2\text{CuLi}$  exist as a dimer like.  $[\text{Me}_2\text{CuLi}]_2$ .

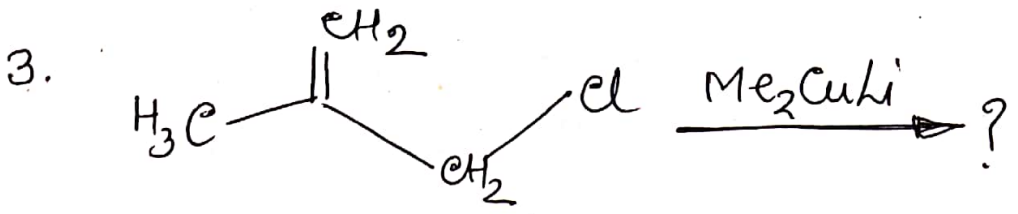
Important Rxn  $\Rightarrow$  1,4-addition, Nucleophilic substitution, Nucleophilic addition

Example  $\Rightarrow$  1.

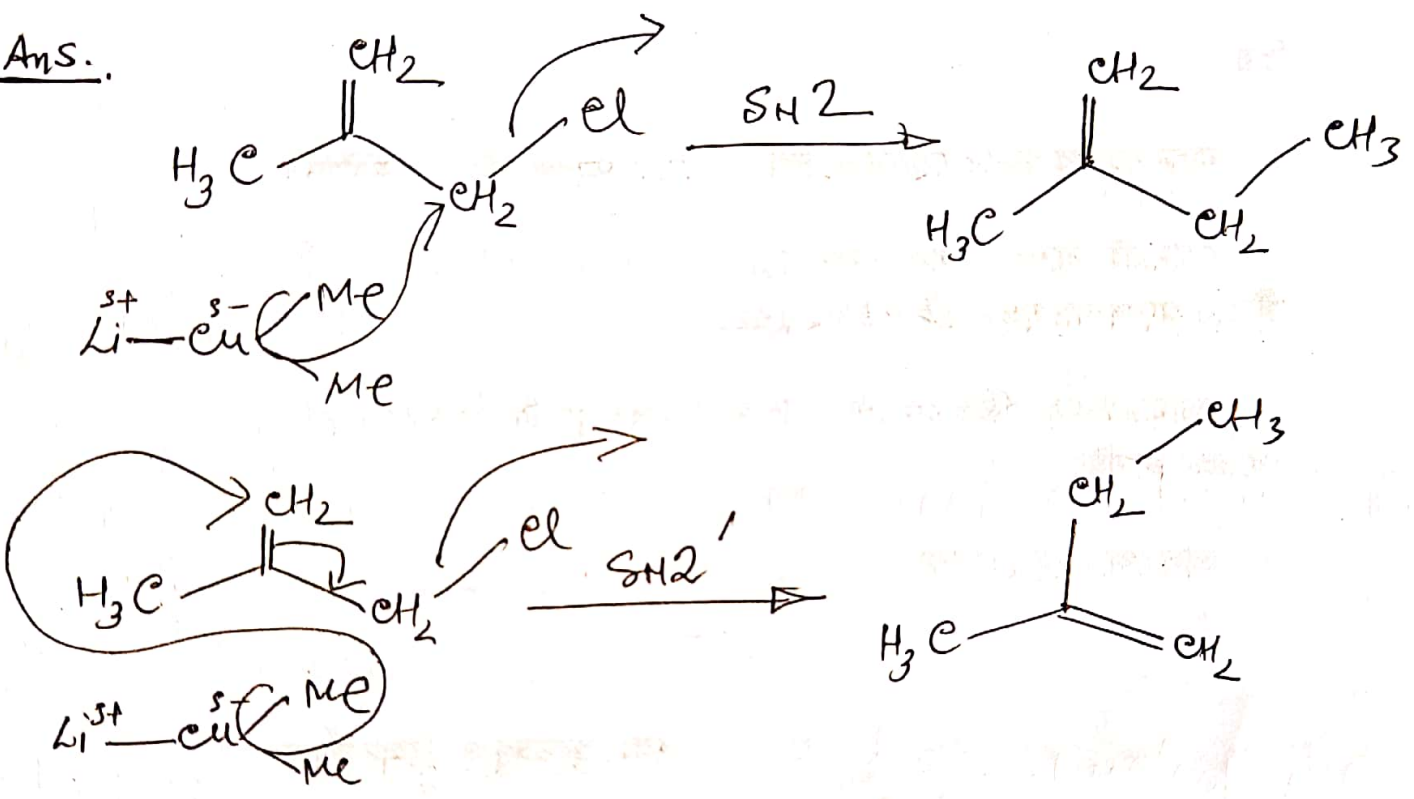




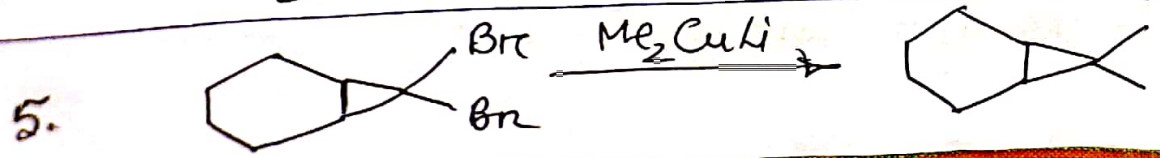
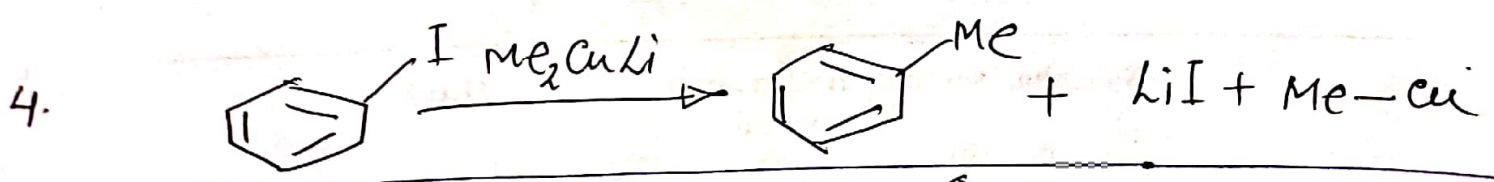
(Also mention the stereochemistry of prod).

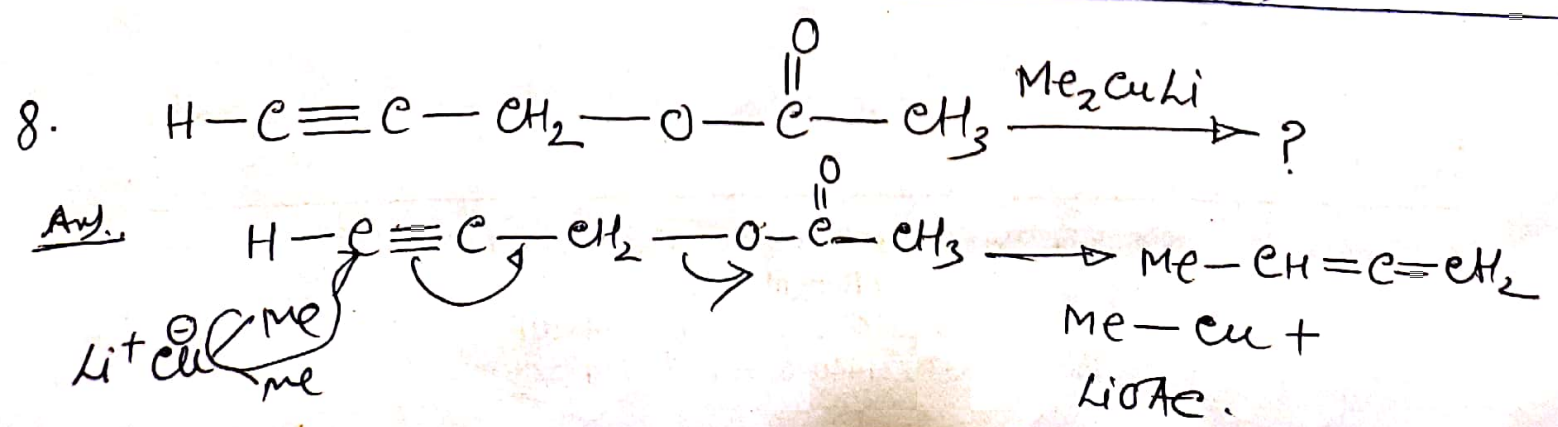
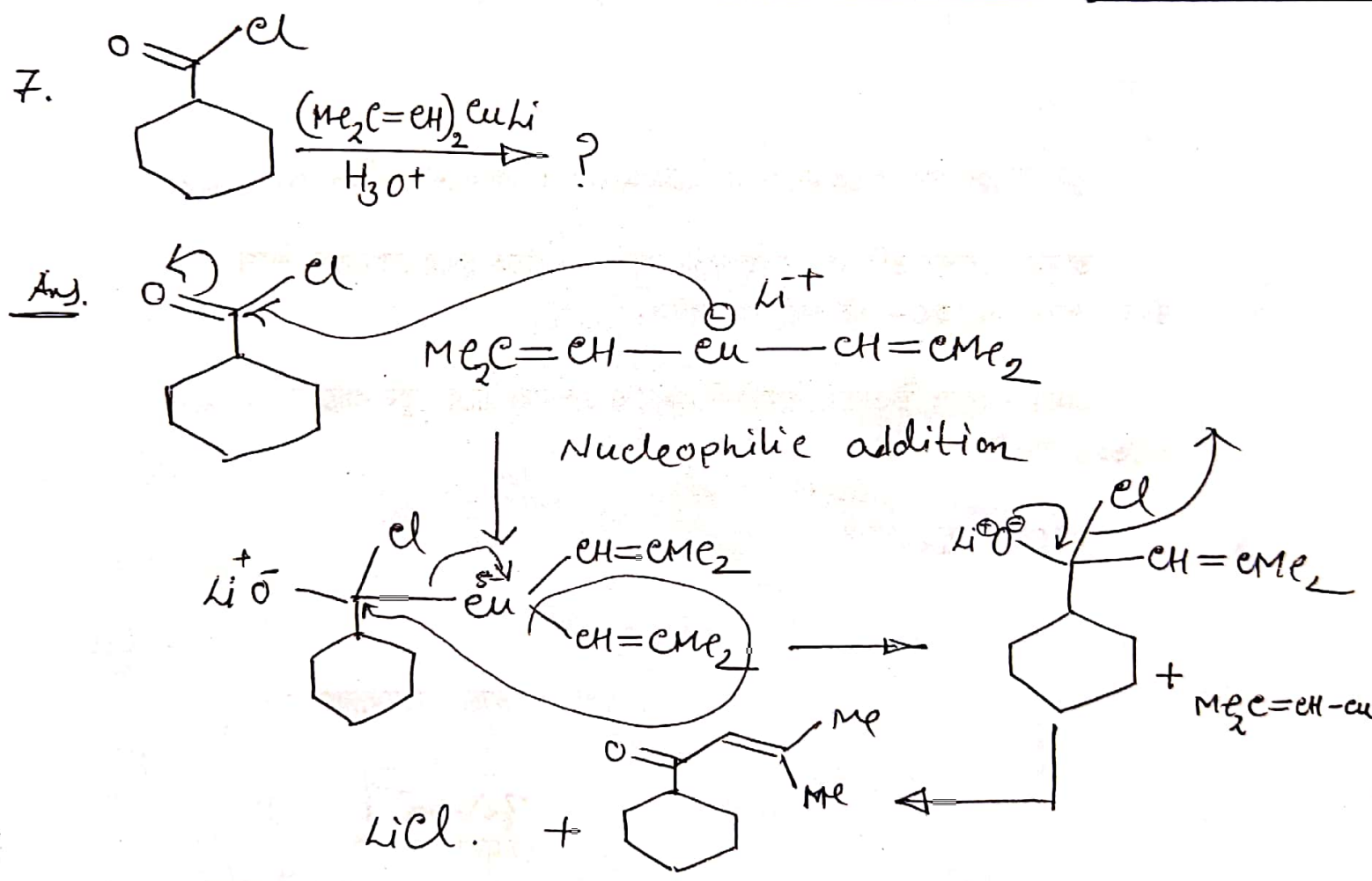
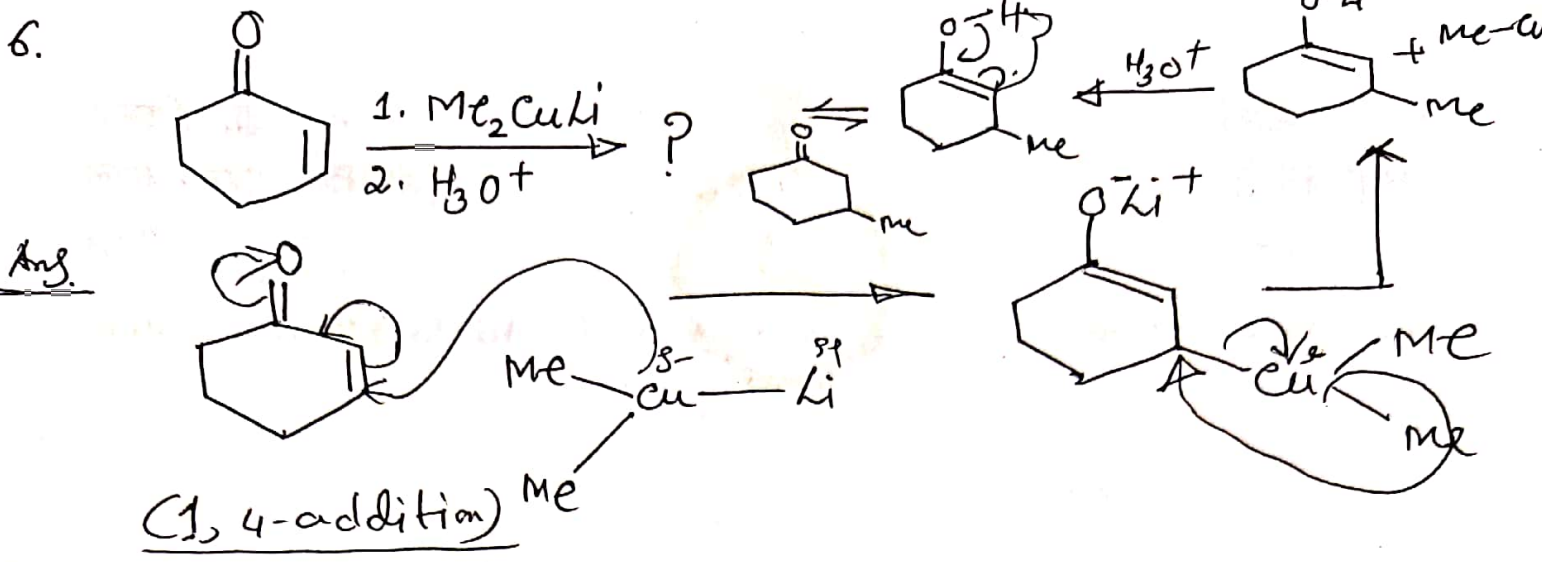


Ans.

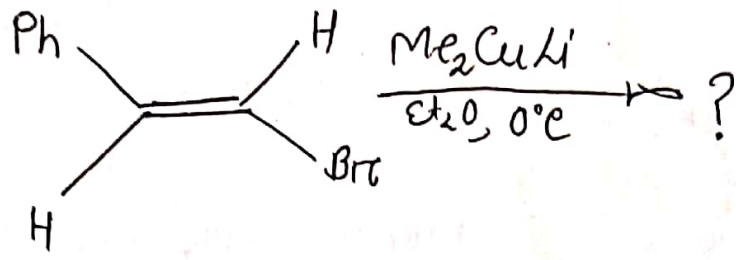


Reaction can occur with both the above mechanism, though products are same in both cases.

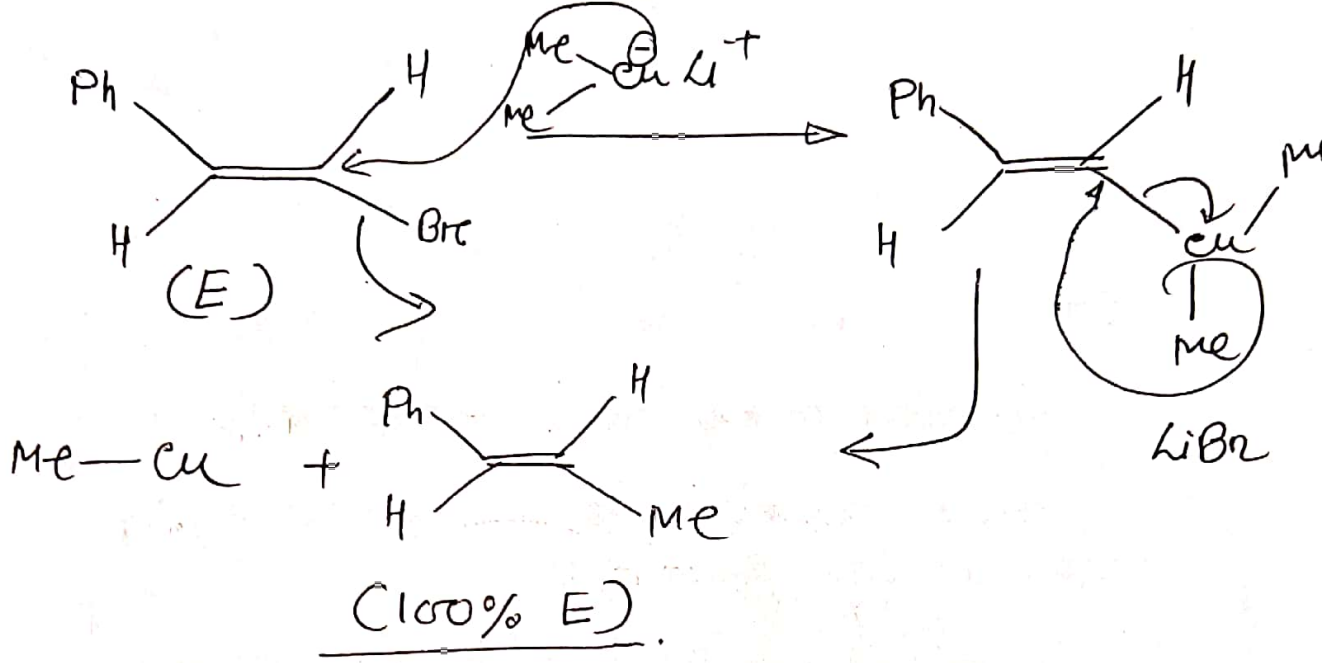




9.



Ans.



10. Reaction with acetylene!

Acetylene reacts with  $\text{R}_2\text{CuLi}$  with 100% syn stereoselectivity.

