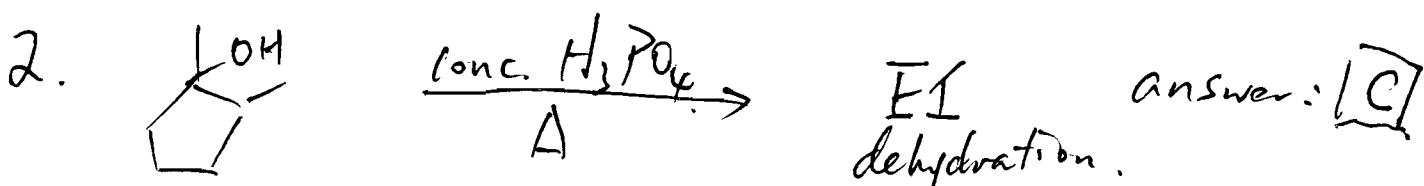


CH<sub>3</sub>OH.  
 Answer: (a).

Explanation: CC1(Br)CCCC1 No stereochemistry shown.

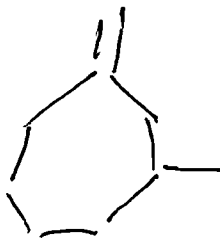
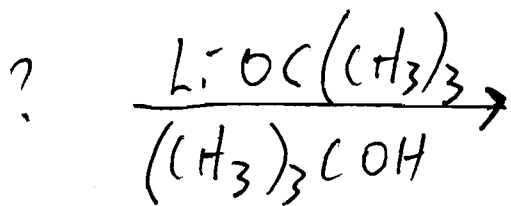
CH<sub>3</sub>OLi<sup>-</sup> and CH<sub>3</sub>CH<sub>2</sub>OLi<sup>-</sup> are strong non-bulky base (favors Zaitsev product).  
 pp 291-293. E2



dehydration.  
 pp. 327-329.

Explanation: CC1(O)CCCC1 3° alcohol → E1 with conc. H<sub>3</sub>PO<sub>4</sub>.  
 Favors Zaitsev product.

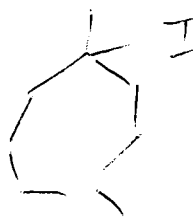
3.



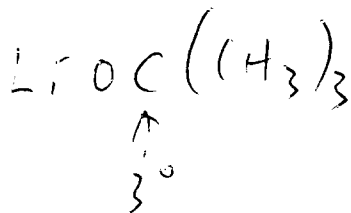
Hoffman product.

Answer = (a).

Explanation:

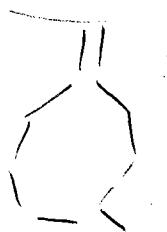
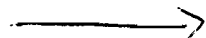
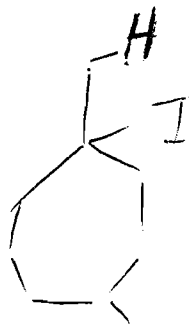


No stereochemistry shown  
assume: antiperiplanar  
requirement met pp. 297-300.



is a bulky base.

it favors the formation of the  
least substituted alkene (Hoffman product)



Hoffman

+

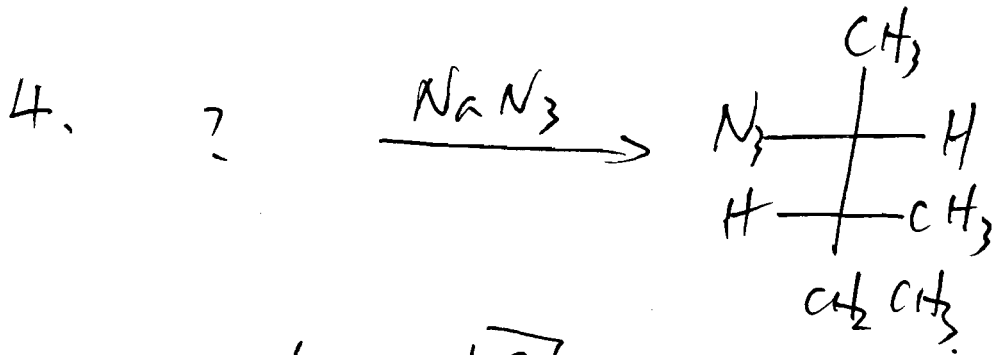


Zaitsev

+

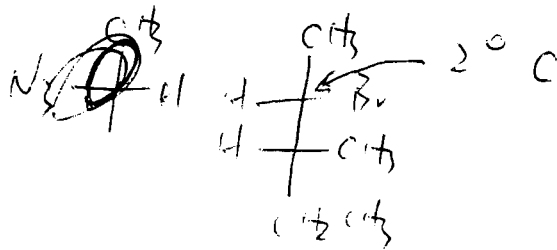


Zaitsev



answer: (C)

Explanation:  $\ominus \text{N}_3$  is a strong Nu.



$\text{S}_\text{N}2$  Rxn = inversion of configuration  
p. 248-249.

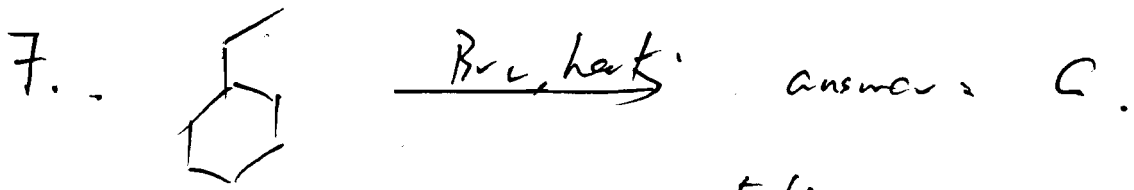
5. answer = (C)

Explanation:  $\text{Na}^+ \text{CN}^-$ ,  $\ominus \text{CN}$  is a strong Nu.  
strong Nu +  $2^\circ$  halide  $\Rightarrow \text{S}_\text{N}2$

6. answer = (D)

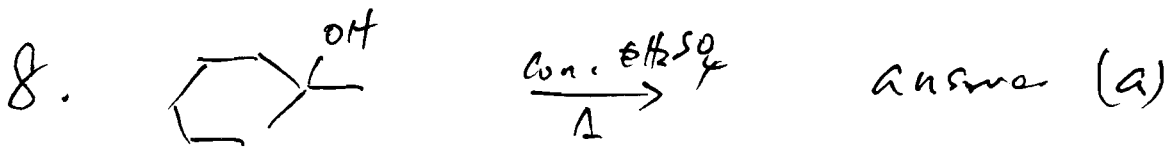
$\text{LiOC}(\text{CH}_3)_3$  is a ~~strong~~ strong.

Bulky base. E2 and Hoffmann product.

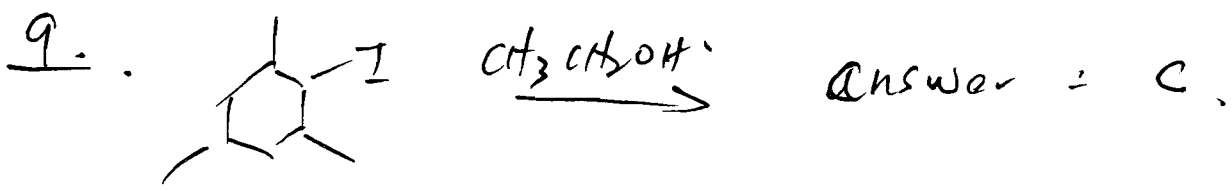


~~pp. 54~~

Explanation: CH<sub>3</sub> · pp. 544 - 549

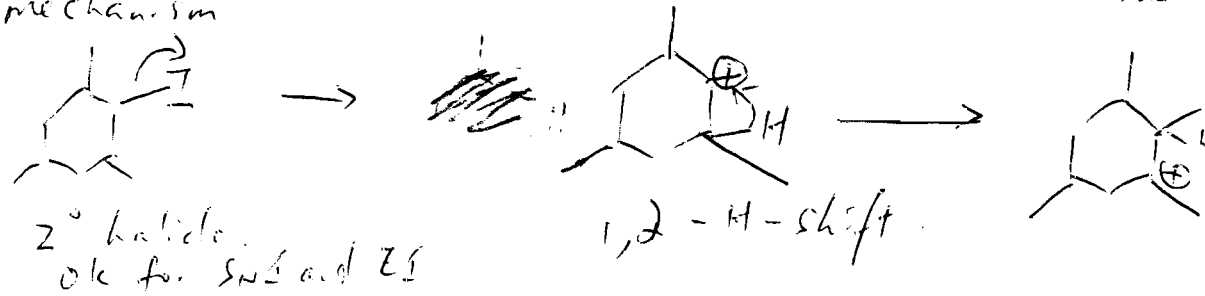


Explanation: 3° alcohol = E1.  
 favors Zaitsev product.  
 pp. 327 - 329

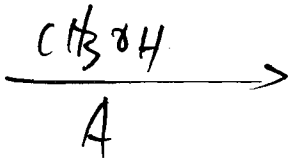
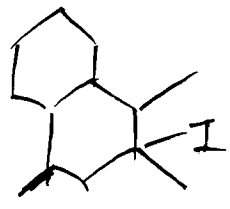


Explanation: CH<sub>3</sub>CH<sub>2</sub>OH is a weak Nu and weak base.

mechanism



10.



Answer: C.

Explanation:

2° + CH<sub>3</sub>OH ⇒ E1 and S<sub>N</sub>1 process  
 weak base and weak Nu. favors Zaitsev product

11.

Answer: C

Explanation

NaOH is a strong, not bulky base.

Favor E2, Zaitsev product.

12.

Answer: B

Explanation p. 250

13.

Answer: B.

Explanation:

~~inversion of~~  
 inversion of configuration

14.. answer = ~~(a)~~ (a)

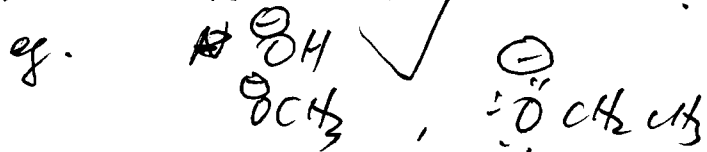
Explanation p. 288.

15. answer = ~~(a)~~ (a)

Explanation: SW 2

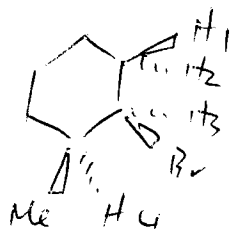
pp. 335 - 337

16.. with a non bulky base.

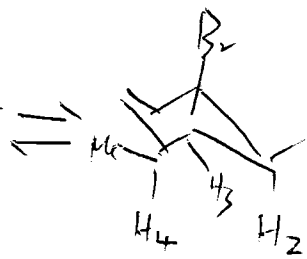
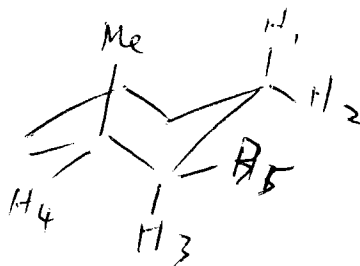


answer: ~~(a)~~ (D)

Explanation: pp. 297 - 300.



=



~~(a)~~

Br and H4 are anti-periplanar

17. answer : a.

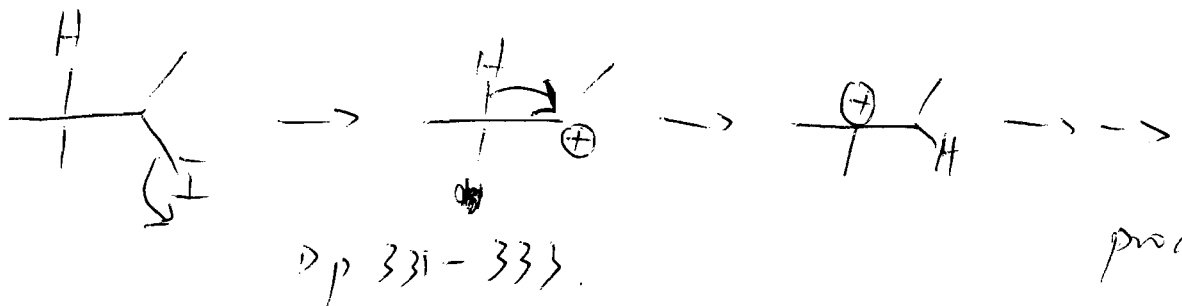
Explanation :



flip the ring  
= answer.

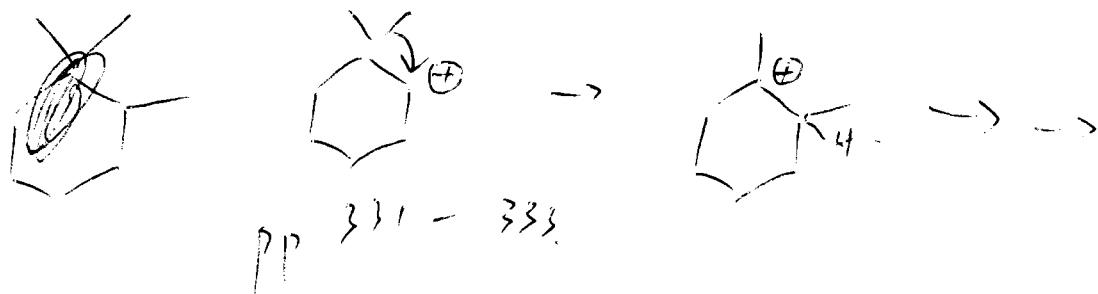
18. answer : a.

Explanation :  $S_N1$  with a weak Nu  
rearrangement  
mechanism.



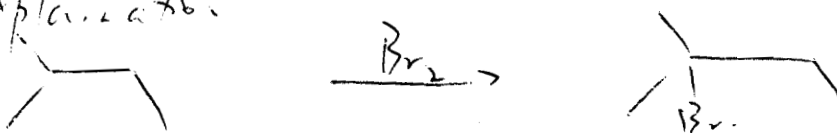
19. answer : (a)

Explanation :  $E1$  with rearrangement



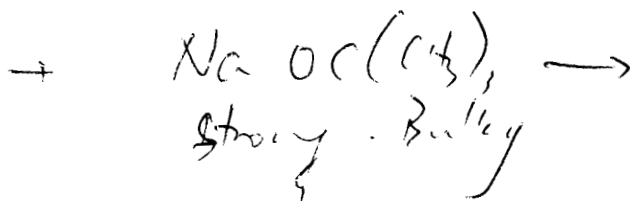
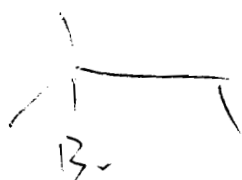
Answer = (B)

Explanation

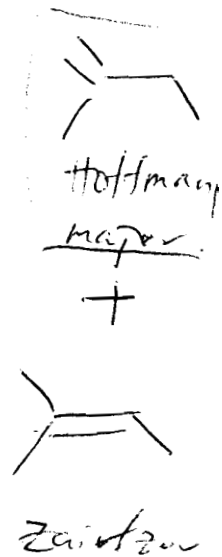


CH<sub>3</sub>

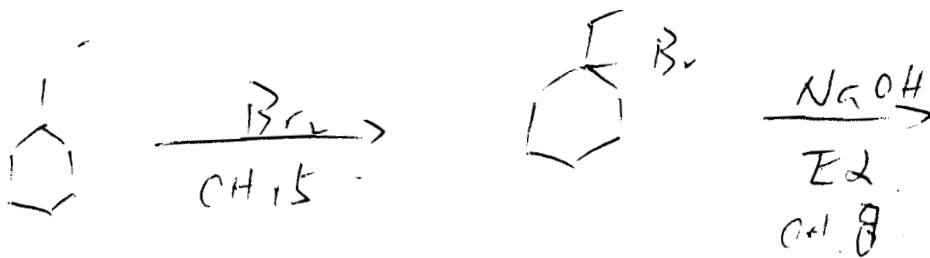
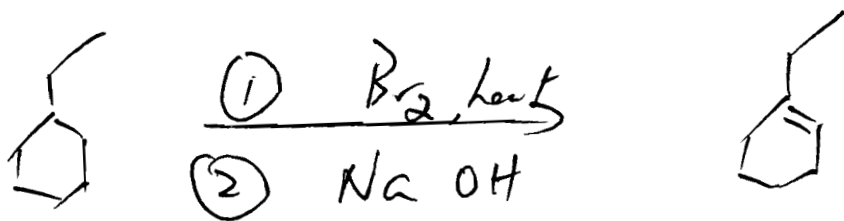
radical substitution Rxn



NaOC(CH<sub>3</sub>)<sub>3</sub>  
 Strong - Bulky  
 base  
 favors the  
 least substituted  
 alkene = Hoffmann  
 product



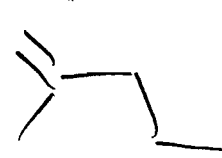
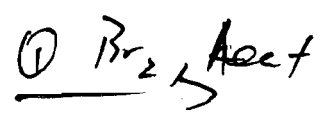
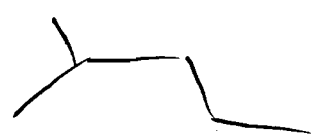
21.



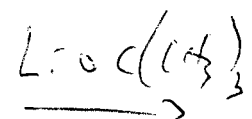
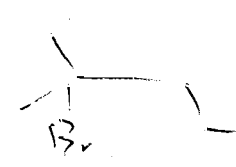
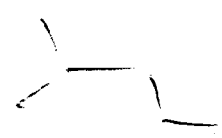
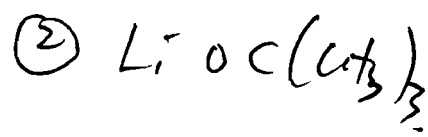
NaOH is a strong, Non-bulky base.



22.



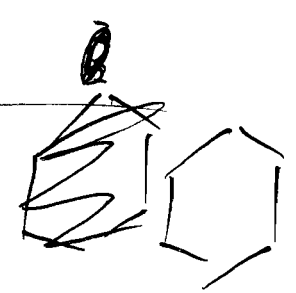
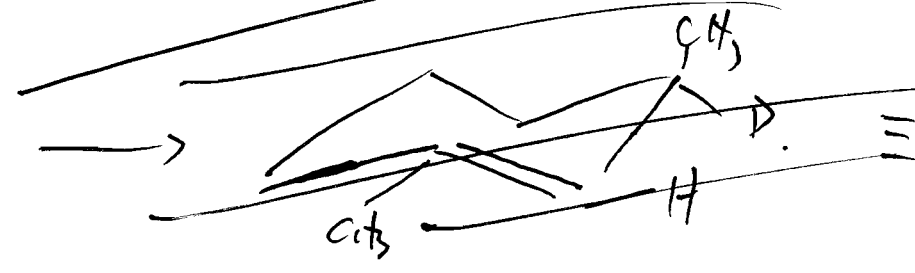
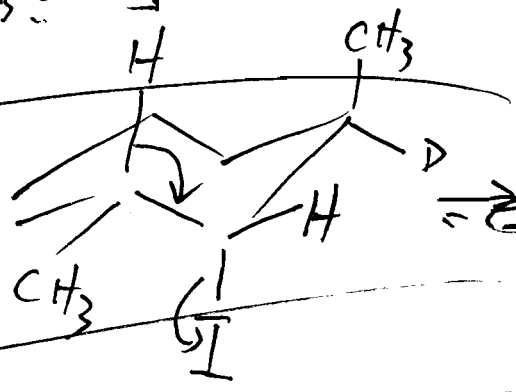
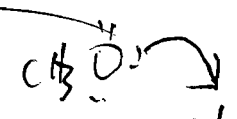
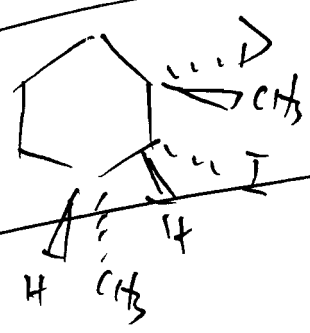
Explain the



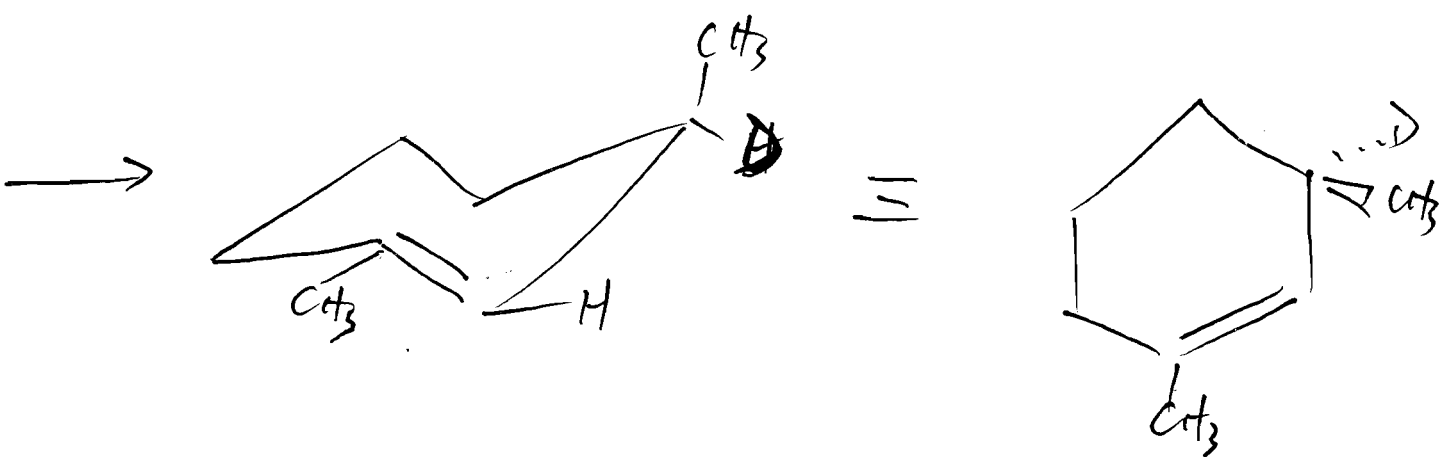
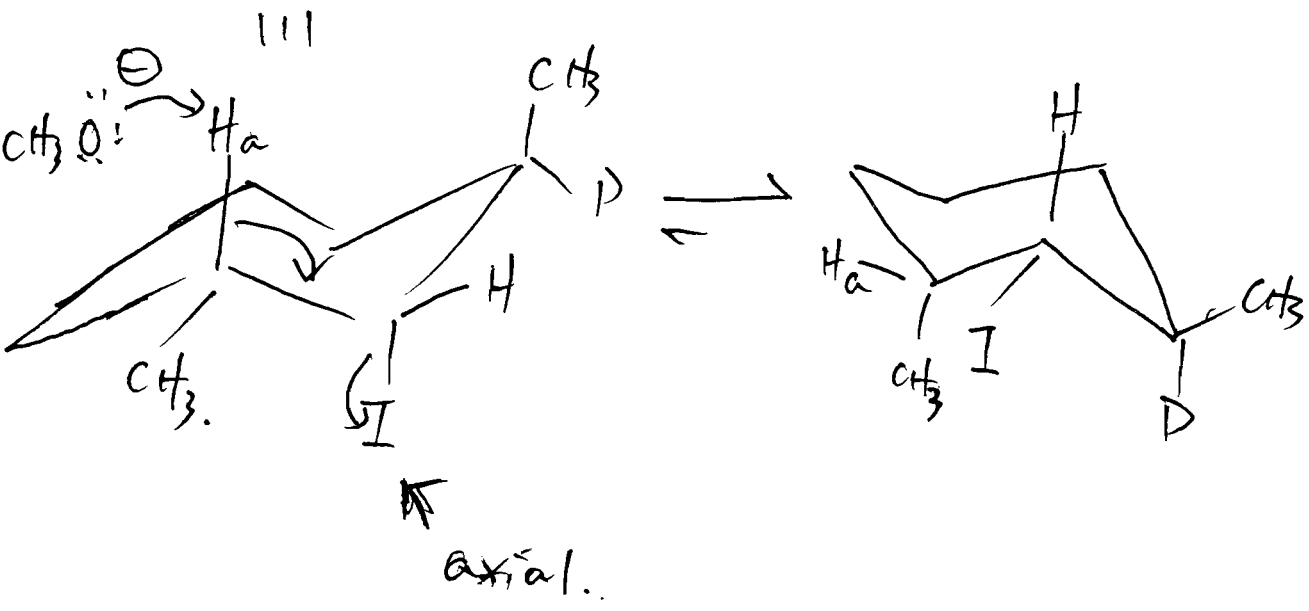
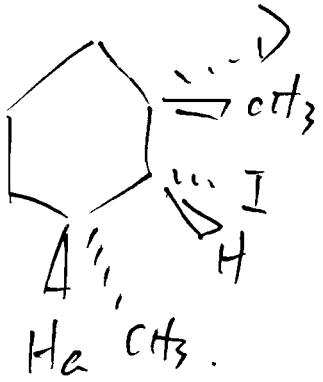
strong and

bulky base  
favors Hofmann  
elimination...

23.

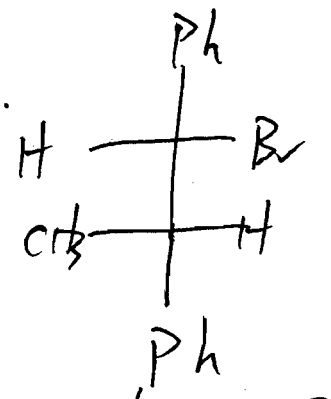


23

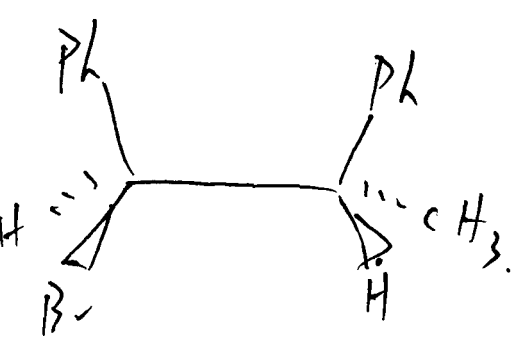


pp. 297 - 300.

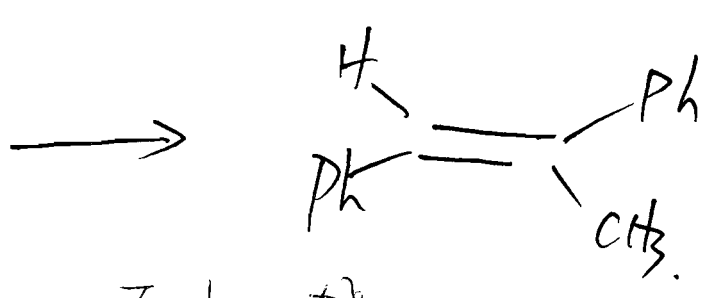
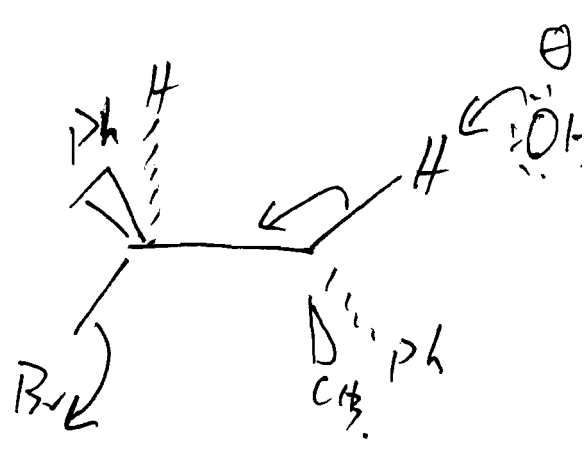
24.



Fischer projectio.  
|||



Rotatio.  
→



Explanation

pp. = 97 - 300  
problem 8.18.