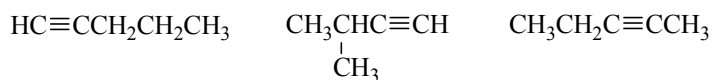


(一) 教材练习题

4.1



4.2 无。

4.3 (1) 1,5-己二烯-3-炔 (2) 二(1-环己烯基)乙炔 (3) 3-环戊基-1-丙炔

4.4 (1) $\text{CH} > \text{CH}_2 > \text{CH}_3$ (2) $\text{CHCl} > \text{CH} > \text{C}\equiv\text{CH}$

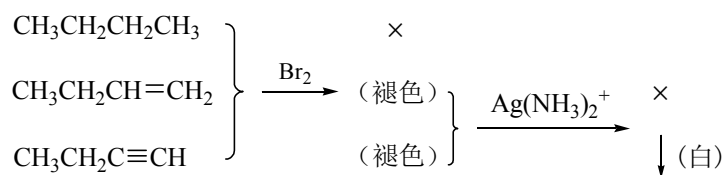
4.5 (1) 与格氏试剂能反应, 其它不能, 因酸度不够。

(2) 原料在碱性条件下得到烯烃, 加溴后得二溴代物, NaNH_2 作用下得炔钠, 水解后得目标产物。

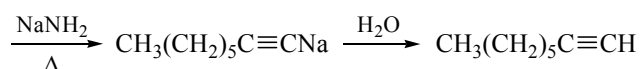
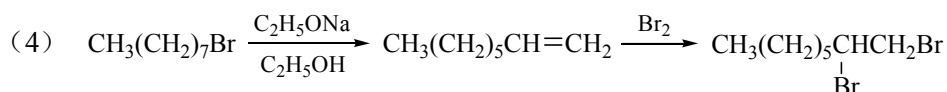
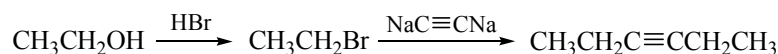
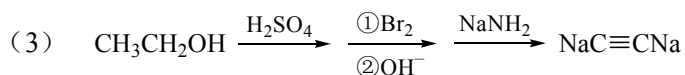
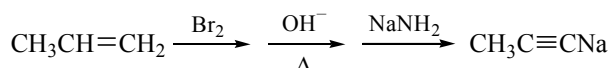
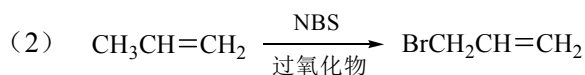
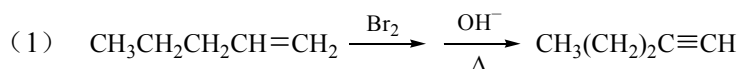
4.6

(1) $\text{HC}\equiv\text{CCH}_2\text{CH}_2\text{CH}_3$ (2) $\text{CH}_3\text{CH}_2\text{C}\equiv\text{CCH}_2\text{CH}_3$

4.7

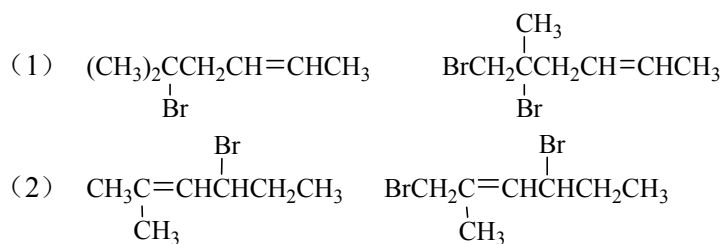


4.8

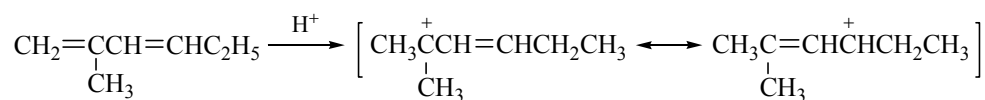


4.9 (1) B 较稳定 ; (2) A 较稳定。

4.10



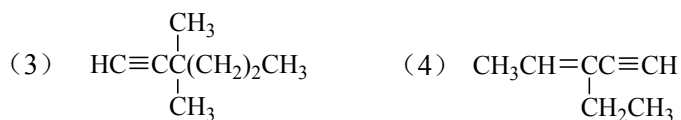
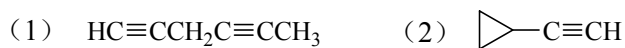
原因如下:



4.11 (1) 吸电子 (2) 吸电子 (3) 给电子 (4) 吸电子

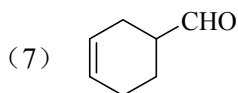
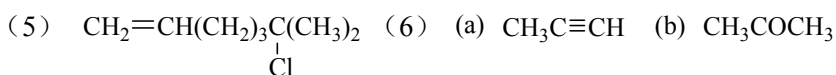
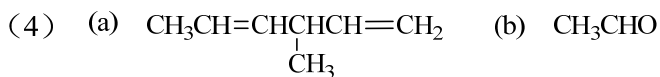
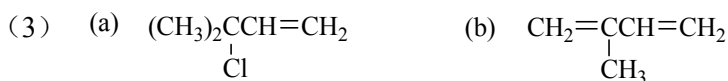
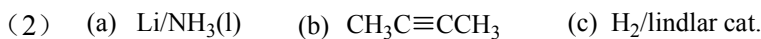
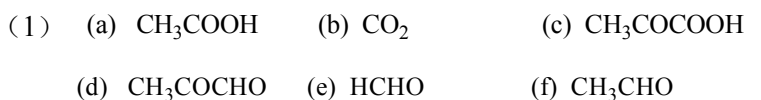
(二) 教材习题

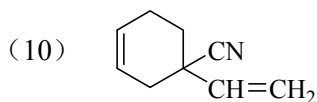
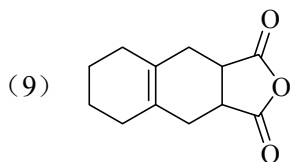
1.



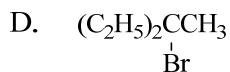
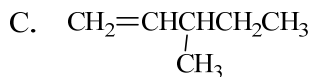
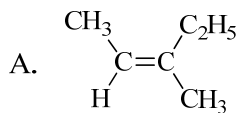
2. (1) 4-甲基-3-异丙基-1-戊炔 (2) 5,6-二甲基-3-正丁基-1-庚炔
 (3) 2-甲基-1,6-庚二烯-3-炔 (4) (Z)-3-乙基-4-异丙基-1,3-己二烯-5-炔
 (5) (3E,7Z)-3,4-二甲基-3,7-癸二烯 (6) 1-环己基-1-丙炔

3.

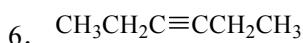




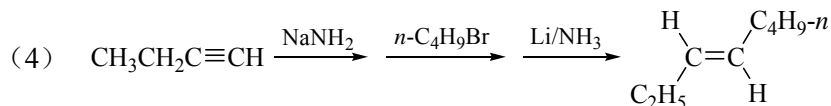
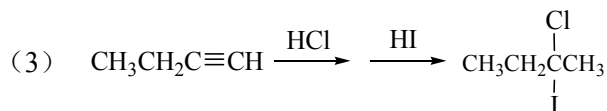
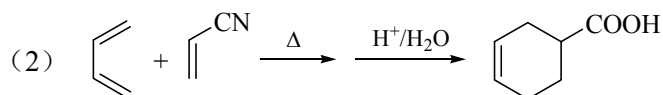
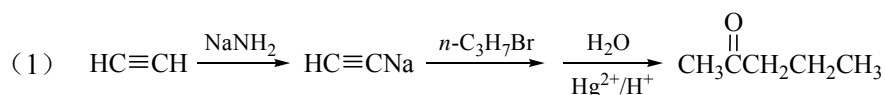
4.



5. 乙烯型卤代烃活性降低。

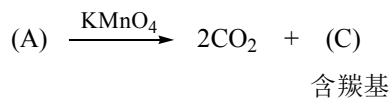


7.

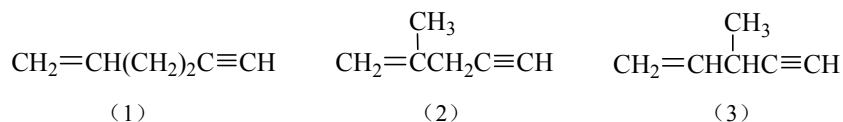


8. 因为 $-\text{C}-\text{C}\equiv\text{C}-\text{C}-$ 是线性的,不可能仅靠两个碳原子将其连成环炔,最小的环炔为环庚炔。

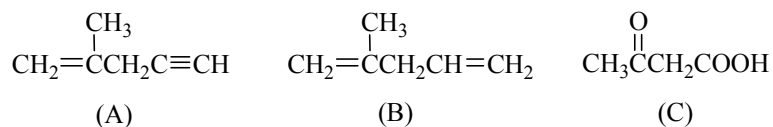
9. 从(A)的不饱和度为3及用 $\text{AgNO}_3/\text{NH}_3\cdot\text{H}_2\text{O}$ 处理得白色沉淀,提示(A)含有1个叁键(且在端位,即含有炔氢)和一个双键;再根据



说明叁键和双键在端位,这也与题中说的无顺反异构体相符。综合上述事实提示(A)的可能结构为:

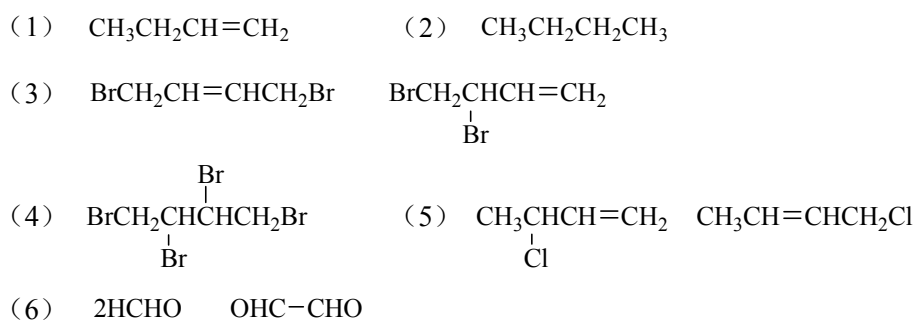


但只有 (2) 的氧化产物中含羰基, 因此 (A), (B) 和 (C) 的结构为:

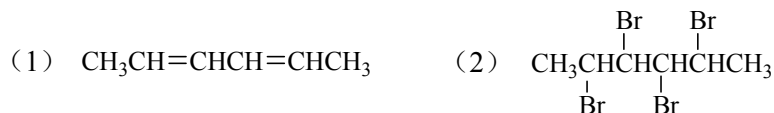


10. (3) > (5) > (1) > (2) > (4)

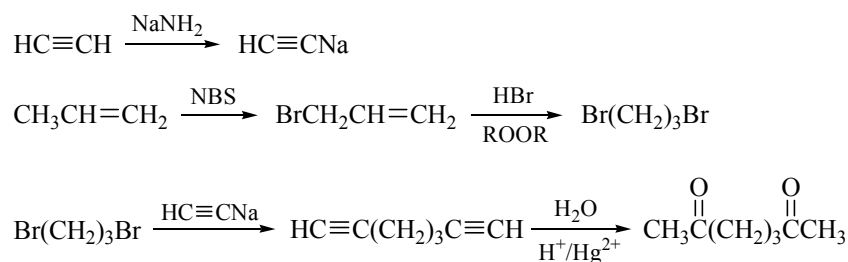
11.



12.



13.



14.

