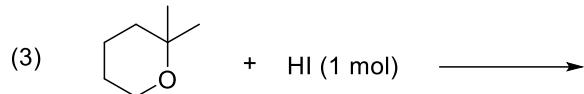
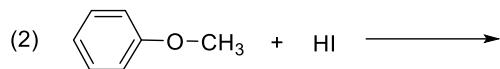


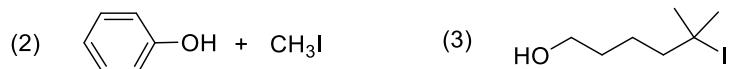
第十六次作业答案

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问题 9-17 写出下列反应的产物：



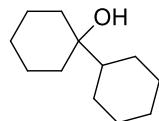
解答：



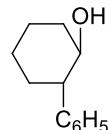
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12. 利用指定原料进行合成（无机试剂和 C₂ 及以下的有机试剂可以任选）：

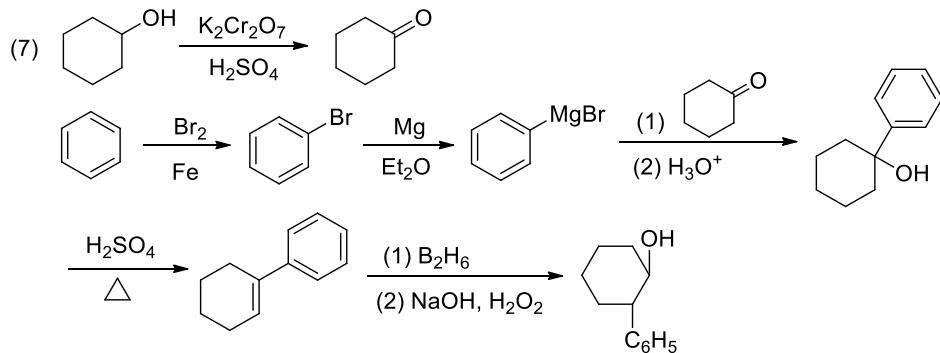
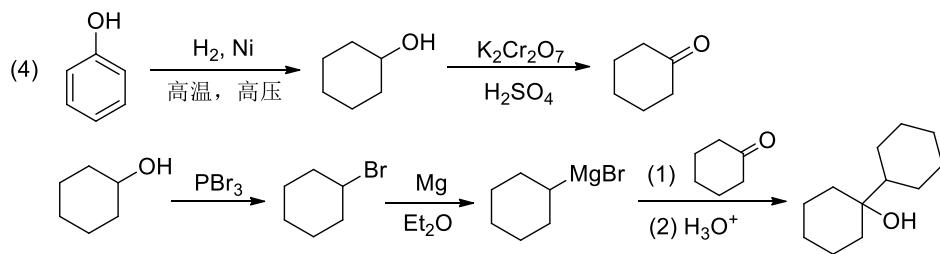
(4) 用苯酚合成



(7) 以苯和环己醇为主要原料合成



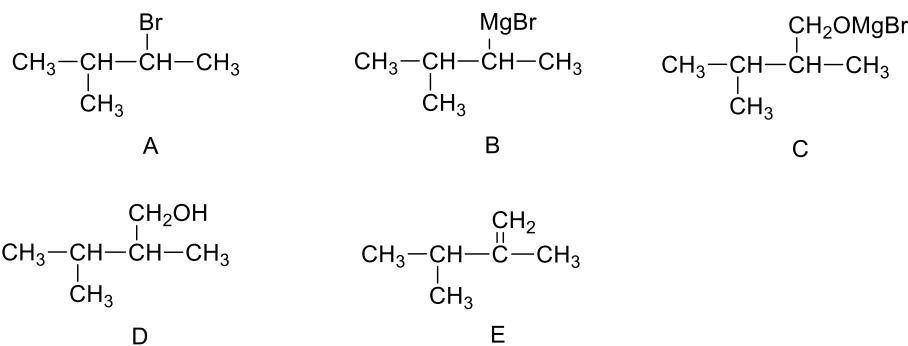
解答：



21. 某卤代烷 A, 分子式为 $C_5H_{11}Br$, 在干燥乙醚中与金属镁形成格氏试剂 B($C_5H_{11}MgBr$)。B 与甲醛加成得化合物 C, 而 C 在酸性条件下水解得化合物 D ($C_6H_{14}O$)。D 以 Al_2O_3 为催化剂, 加热失水得 E(C_6H_{12})。化合物 E 的 IR 谱图: $3095 \sim 3075 \text{ cm}^{-1}$ 有吸收, 2900 cm^{-1} 有强吸收, 1650 cm^{-1} 有中强吸收, 890 cm^{-1} 处也有吸收。 $^1\text{H NMR}$ 谱图中, δ 1.0 (双峰, 6H), δ 1.65 (单峰, 3H), δ 2.2 (多重峰, 1H), δ 4.6 (单峰, 2H)。试确定 A、B、C、D 的结构式。

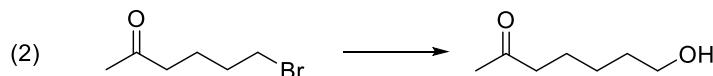
解答:

根据题意推测出化合物 A、B、C、D 的结构式如下:

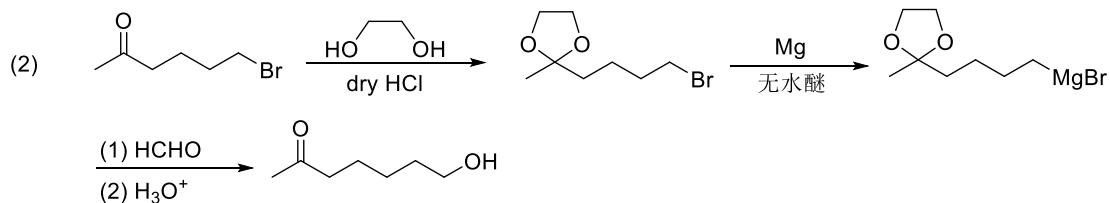


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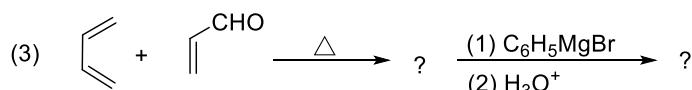
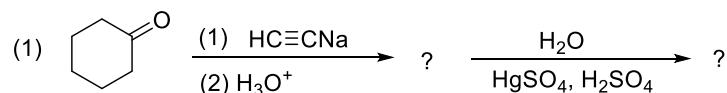
问题 10-8 完成下列转变:



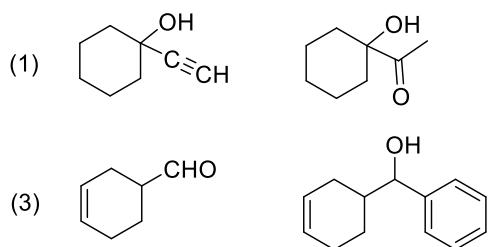
解答:



问题 10-9 写出下列反应的产物:

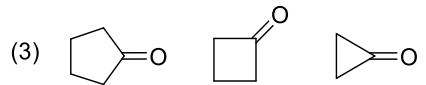
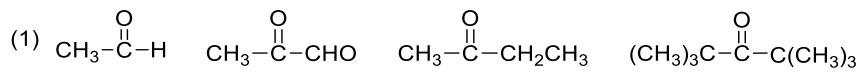


解答:

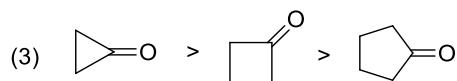
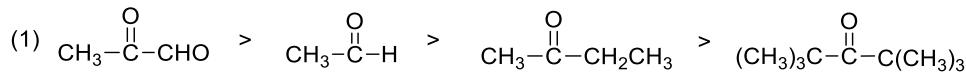


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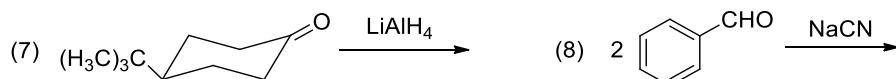
4. 将下列各组化合物按其羰基的活性排列成序:



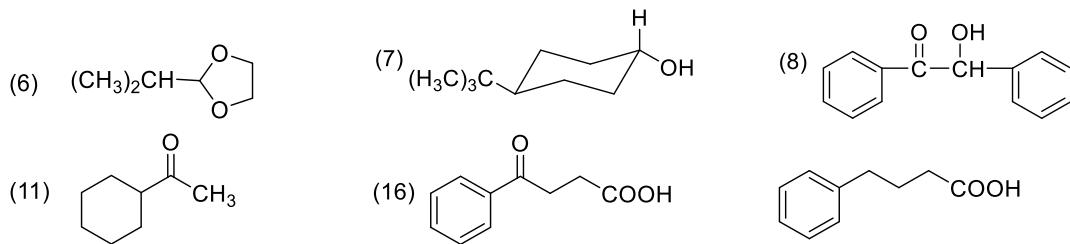
解答: 羰基的亲核加成反应活性是空间因素和电子效应的综合结果, 由大到小的顺序为:



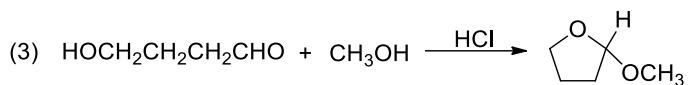
7. 写出下列反应的主要产物:



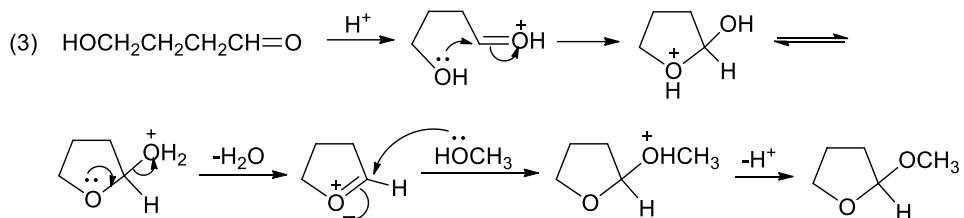
解答:



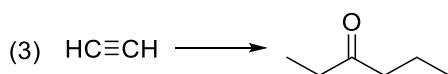
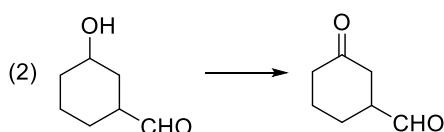
8. 写出下列反应可能的机理:



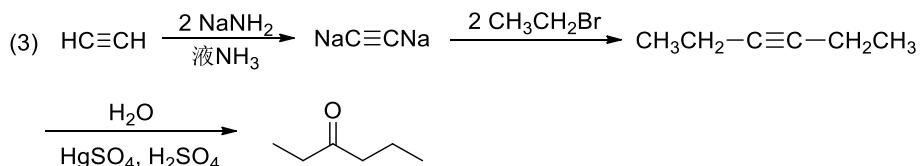
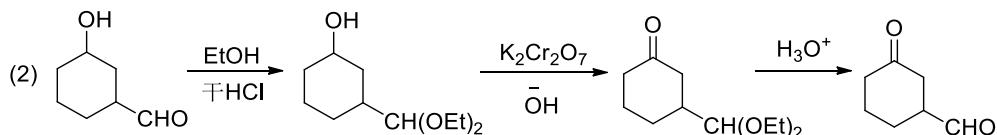
解答：



9. 完成下列转变（必要的无机试剂和有机试剂任用）



解答：



10. 由指定原料合成:

(4) 由四个碳及以下有机试剂合成 

解答：

