

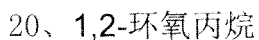
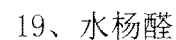
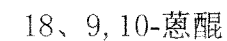
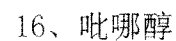
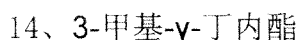
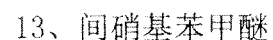
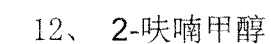
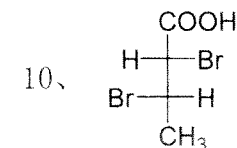
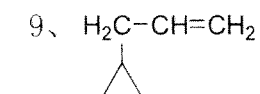
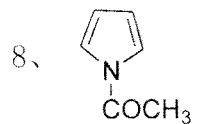
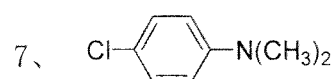
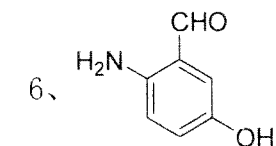
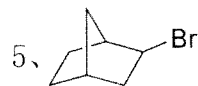
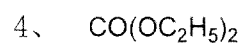
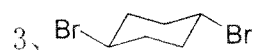
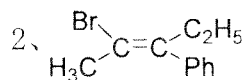
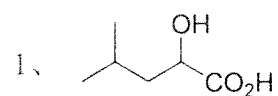
山东大学

二〇一六年招收攻读硕士学位研究生入学考试试题

科目代码 916科目名称 有机化学 (专)

(答案必须写在答卷纸上, 写在试题上无效)

一、命名下列化合物或根据名称写出其结构式 (共 20 题, 每题 1.5 分)



二、解释下列名词的含义 (共 4 题, 每题 2.5 分)

1、Lucas 试剂

2、硫醚

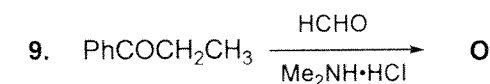
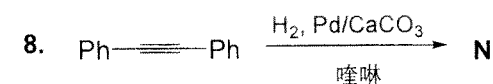
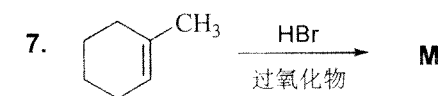
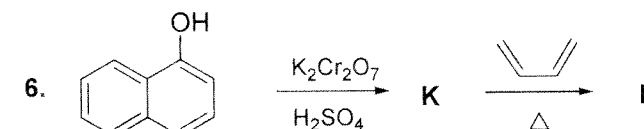
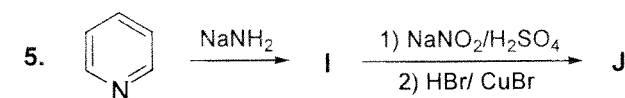
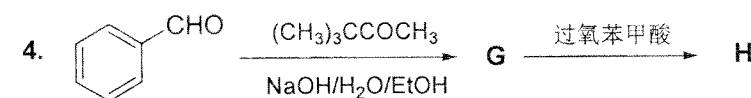
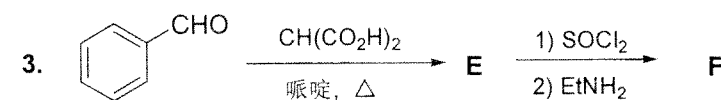
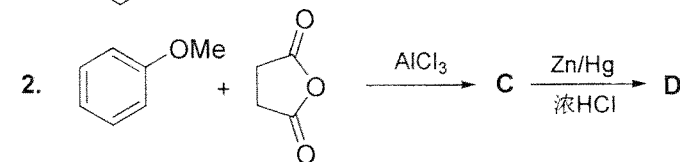
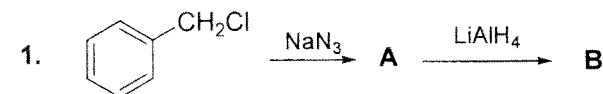
3、赤式

4、迈克尔 (Michael) 加成

三、简答题 (10 分)

简述芳环上取代基对芳香胺碱性强弱的影响。

四、完成下列反应 (写出主要产物) (共 15 空, 每空 2 分)



五、用化学方法鉴别下列各组化合物 (共 4 题, 每题 5 分)

1、2-氯丁酸 丙酰氯 丙酸

2、环戊酮 2-戊酮 丁酰基苯

3、环戊二烯 1-戊炔 环戊烷

4、2-氨基己酸 4-氨基己酸 己酸铵

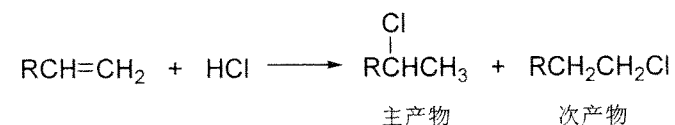
六、问答题 (共 5 题, 每题 6 分)

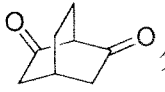
1、将下列化合物按酸性由强到弱排列成序。

丙酸、2-氯丙酸、2-氨基丙酸、2-羟基丙酸、丙酮酸

2、写出 4-叔丁基-N-甲基哌啶与过量溴化苯反应的生成物，有两种异构体，为什么？

3、请解释下述实验事实：



4、化合物  分子中有活泼 α 氢，试问在碱溶液中发生酮式-烯醇式互变异构的难易？说明理由。

5、比较苯甲酸乙酯、对氯苯甲酸乙酯和对甲氧基苯甲酸乙酯碱催化水解时的相对速率，请解释其原因。

七、推断结构 (10 分)

某化合物 A (C_6H_{10}) 与等摩尔溴化氢作用可生成两种化合物，与乙烯反应可生成化合物 B (C_8H_{14})，B 催化氢化生成化合物 C (C_8H_{16})，B 经强烈氧化生成一对称的二元羧酸，试写出化合物 A、B、C 的结构。

八、完成下列转化 (其它试剂任选) (共 2 题，每题 5 分)

