

贵州大学 2007 年硕士研究生入学考试试题

(所有试题答案必须答在专用答题纸上,否则答案无效)

专业名称: _____

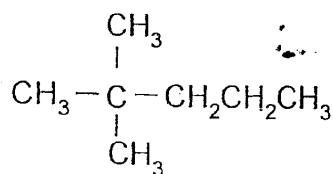
专业代码: _____

科目名称: 有机化学

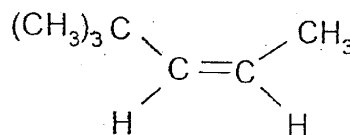
科目代码: 425

一. 1. 用 IUPAC 法命名下列化合物(10 分,每题 2 分)

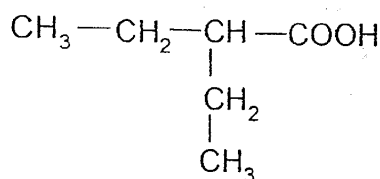
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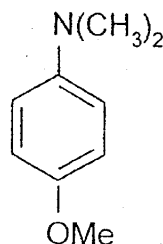
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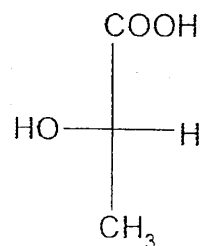
(3)



(4)



(5)



2. 根据下列名称,画出该化合物的结构式 (10 分,每题 2 分)

(1) 环己基甲酸甲酯,

(2) 2-碘-3-氟-4-溴甲苯,

(3) 8-羟基喹啉,

(4) N-甲基吡咯,

(5) NBS

二. 回答下列问题 (30 分,每题 5 分)

1. 试比较下列一组化合物的酸性强弱,并简要解释.

(1) 苯酚, (2) 苯甲酸, (3) 醋酸, (4) 三氟乙酸

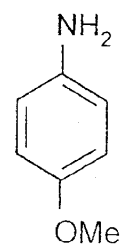
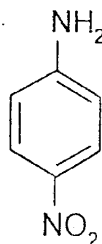
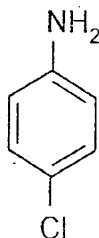
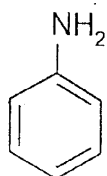
2. 试比较下列一组化合物的碱性强弱,并简要解释.

(1)

(2)

(3)

(4)



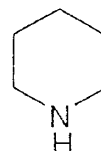
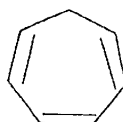
3. 下列化合物哪些具有芳香性? 为什么?

(1)

(2)

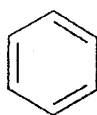
(3)

(4)

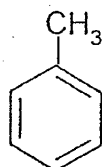


4. 比较下列化合物用 $\text{HNO}_3/\text{H}_2\text{SO}_4$ 进行硝化反应时的活性次序,并简要解释.

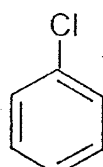
(1)



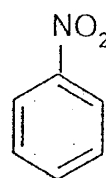
(2)



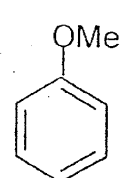
(3)



(4)

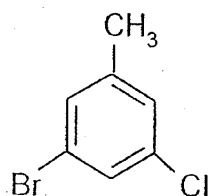


(5)

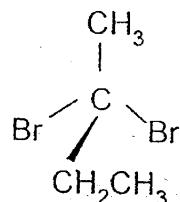


5. 下列化合物哪些具有旋光性?为什么?

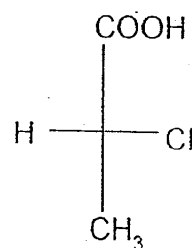
(1)



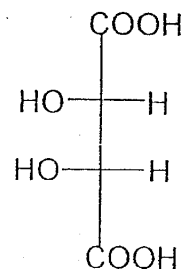
(2)



(3)



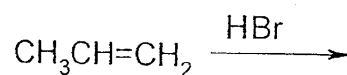
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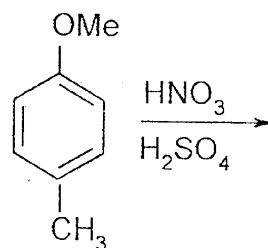
6. 实验室中,如何除去苯中所含有的少量噻吩?

三. 完成下列反应.(30 分,每题 3 分)

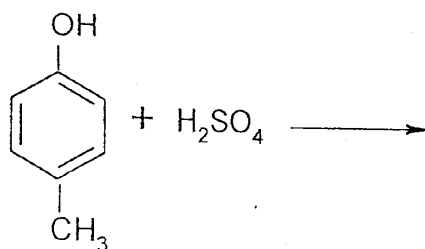
1.



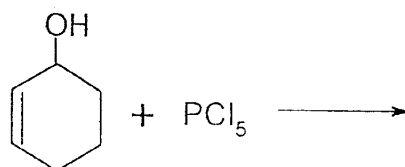
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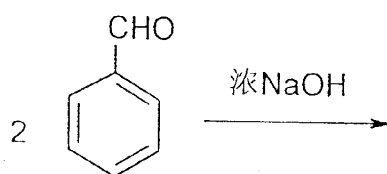
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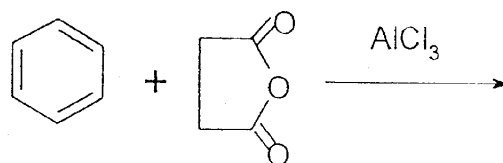
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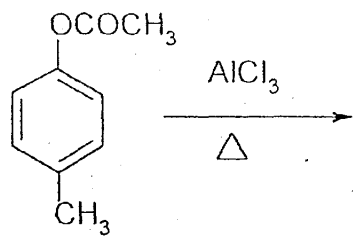
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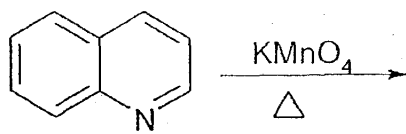
6.



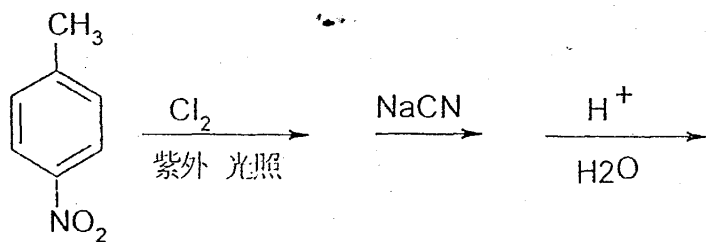
7.



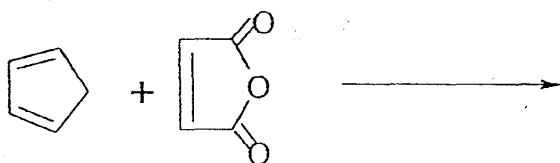
8.



9.

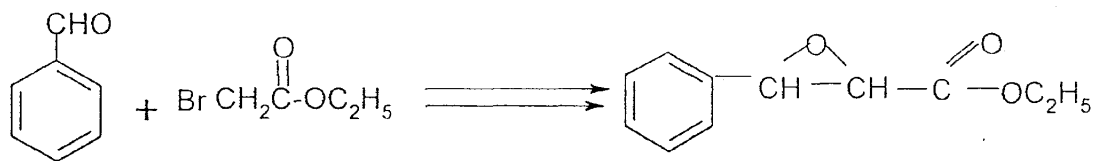


10.

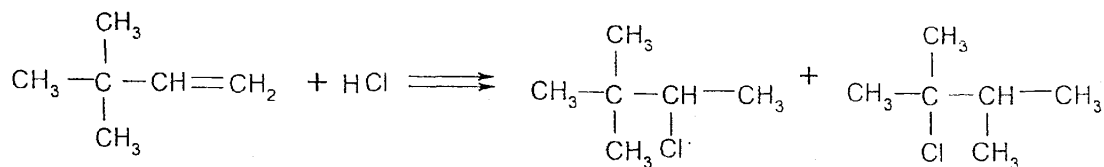


四. 写出下列反应的历程 (20 分, 每题 10 分)

1.



2.

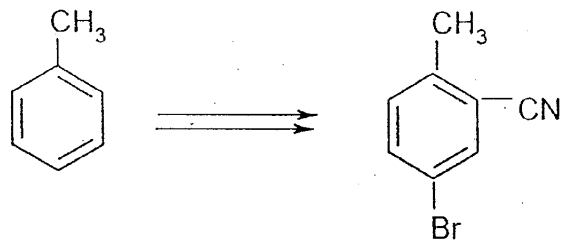


五. 用指定的起始原料, 选择适合的试剂, 合成目标化合物, 写出每步的反应.
(30 分, 每题 10 分)

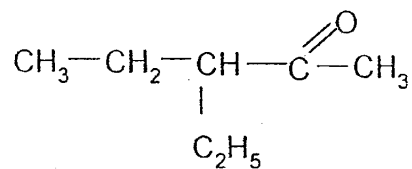
1.



2.



3. 以乙酰乙酸乙酯为主要原料,选用适合的其它试剂,合成如下化合物:



用化学反应式合成步骤.

六. 回答下列问题(20 分,每题 10 分)

1. 在测定有机物的分子结构中,列举三种所使用的现代分析测试仪器,并简要说明所用仪器主要检测分子的什么信息?
2. 列举二种以上有机物的纯化方法,并概述其纯化的主要原理.

结束。