

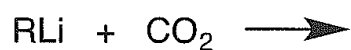
東吳大學 107 學年度暑假轉學生招生考試試題

第 1 頁，共 6 頁

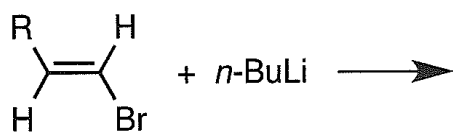
系級	化學系三年級	考試時間	100 分鐘
科目	有機化學	本科總分	100 分

1. Predict the major product for the following reactions. (30 points)

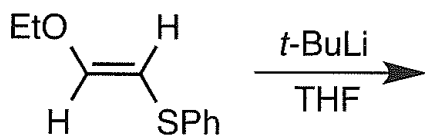
a.



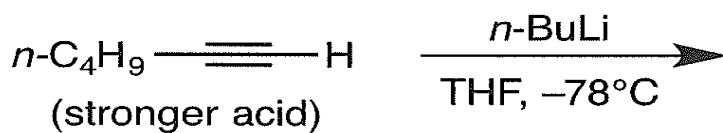
b.



c.



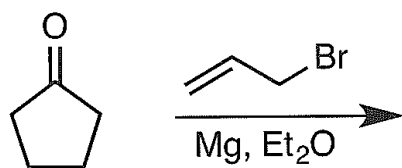
d.



e.

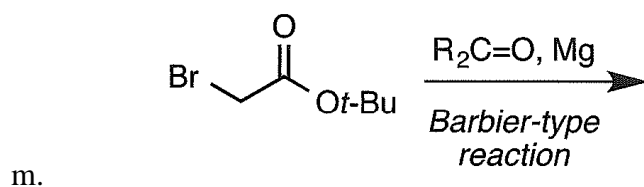
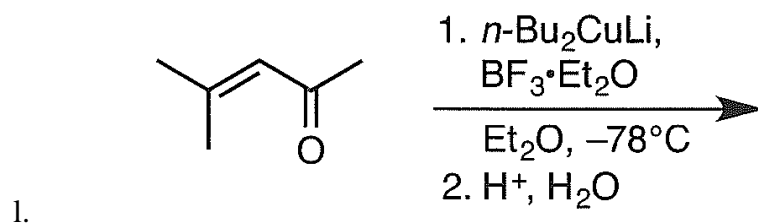
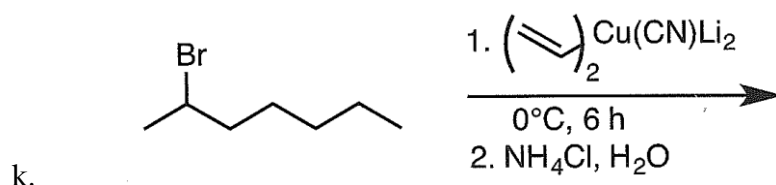
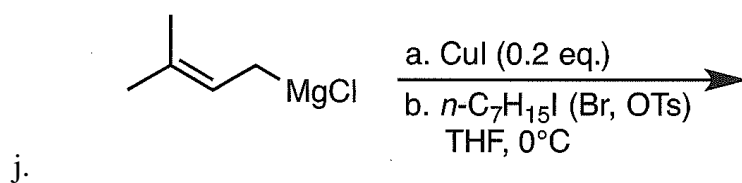
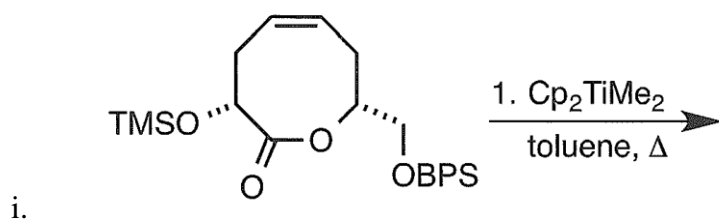
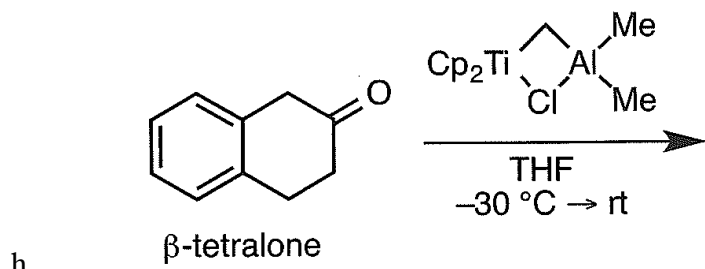


f.

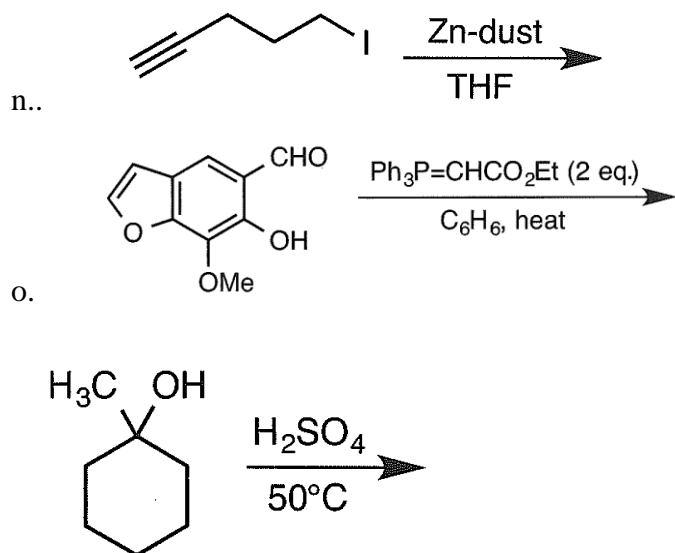


g.

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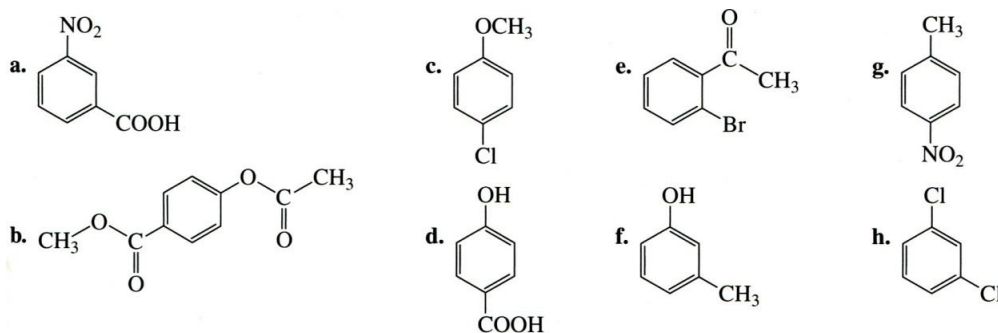


系級	化學系三年級	考試時間	100 分鐘
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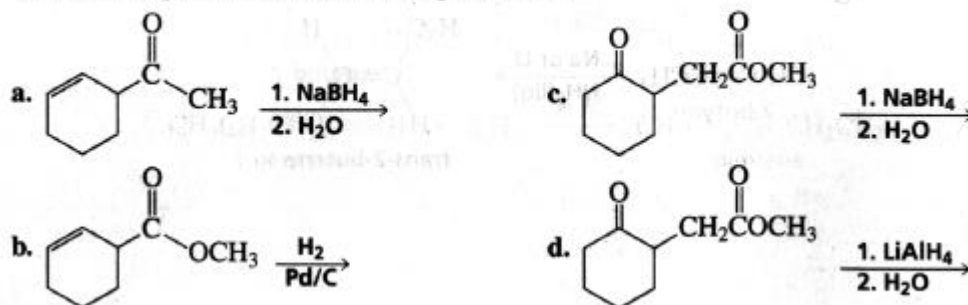
2. (16 points)

For each of the following compounds, indicate the ring carbon(s) that is/are nitrated when the compound is treated with $\text{HNO}_3/\text{H}_2\text{SO}_4$:



3. (8 points)

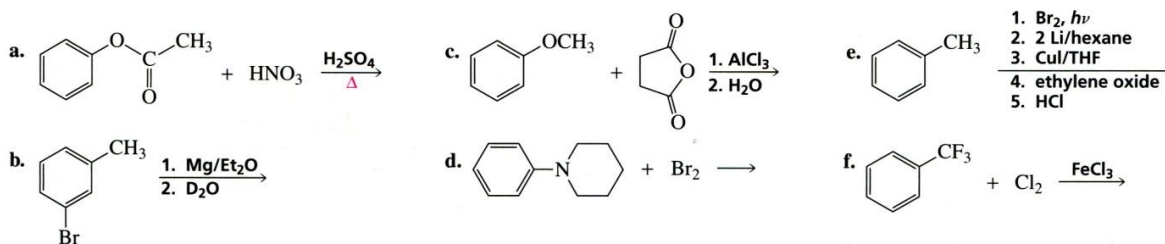
What are the products of the following reactions?



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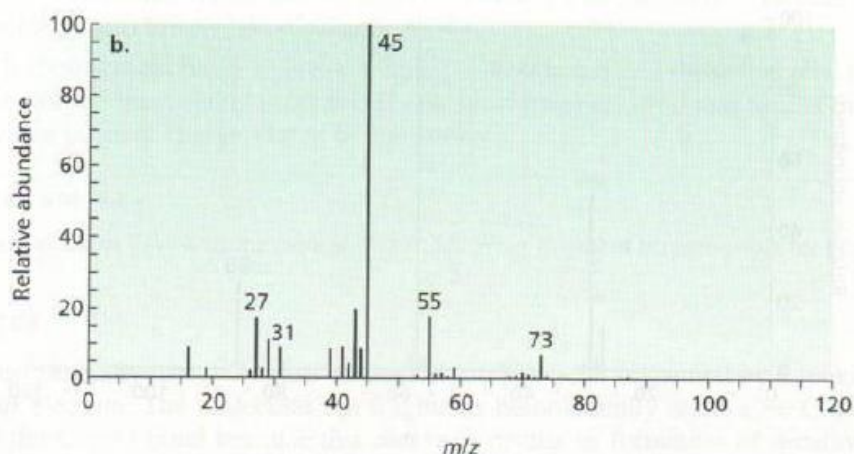
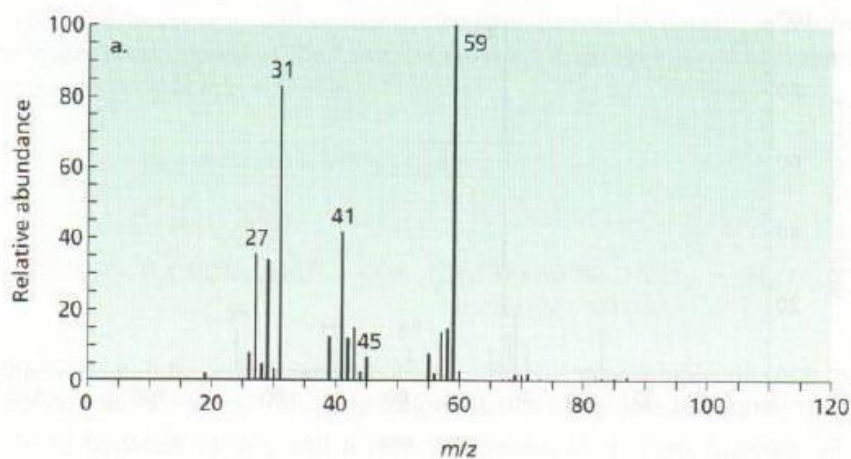
4. (12 points)

What are the products of the following reactions



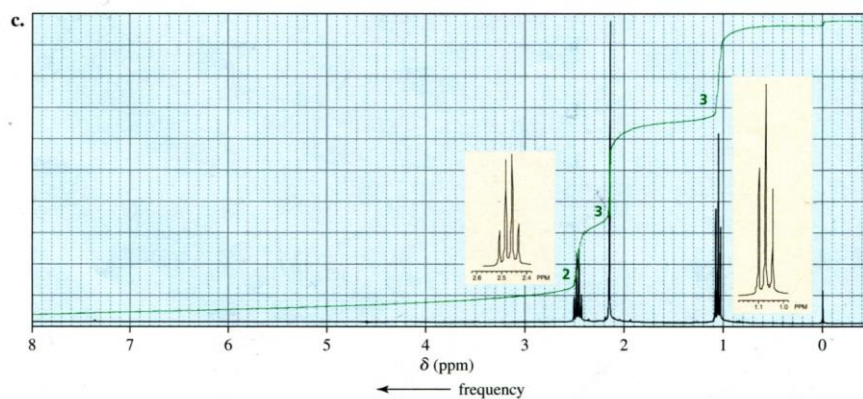
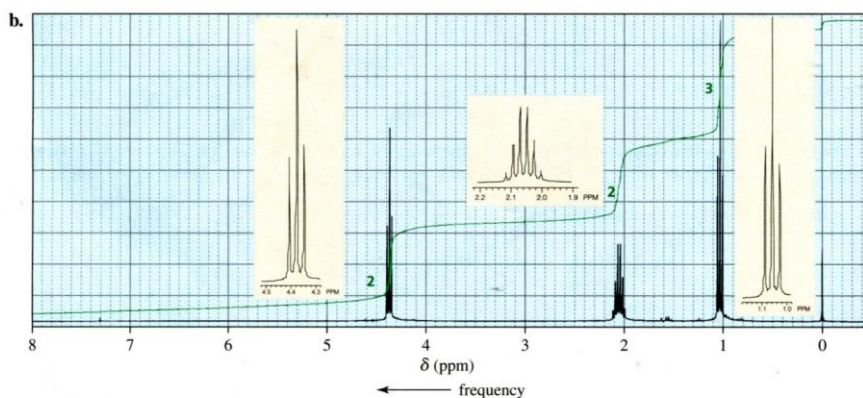
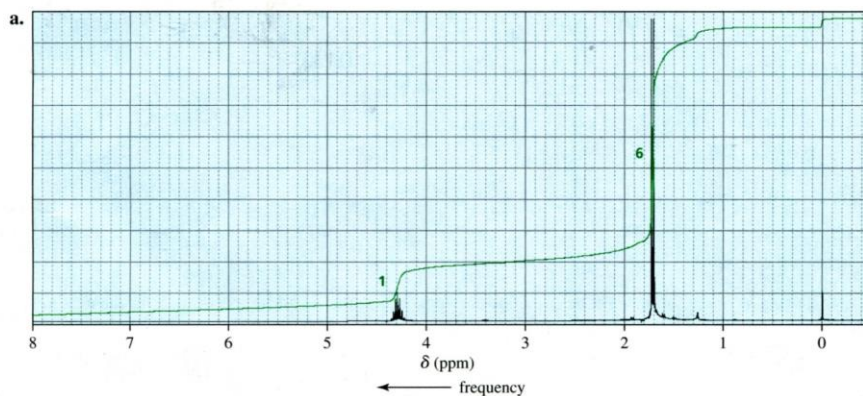
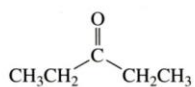
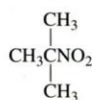
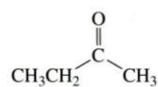
5. (12 points)

The reaction of (Z)-2-pentene with water and a trace of H₂SO₄ forms two products. Identify products from their mass spectra that are shown in Figure 10.



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6. Match each of the ^1H NMR spectra with one of the following compounds(12 points)



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7. (10 points)

Which one of the following five compounds produced the IR spectrum shown in Figure 52?

