

大同大學 100 學年度轉學入學考試試題

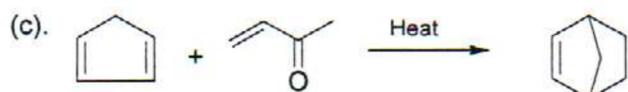
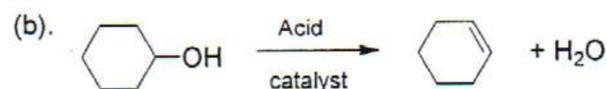
考試科目: 有機化學

所別: 化學工程學系

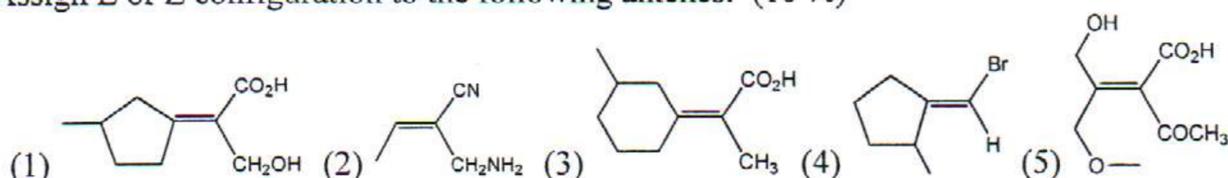
第1/2頁

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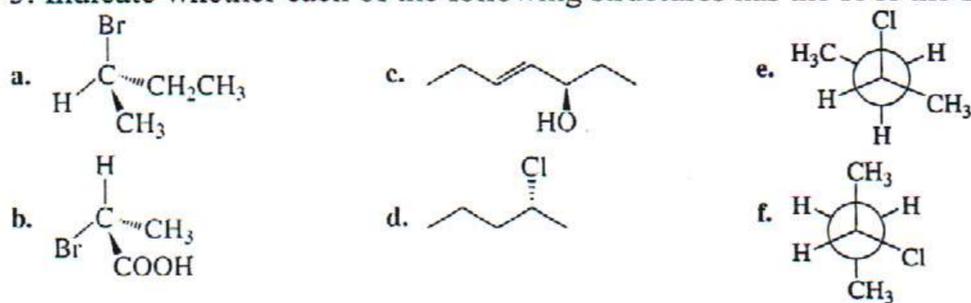
1. Identify the following reactions as additions, eliminations, substitutions, or rearrangements: (8%)



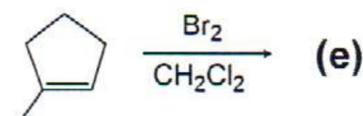
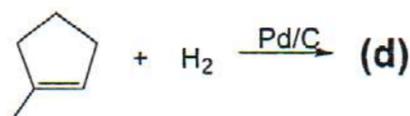
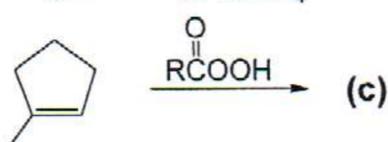
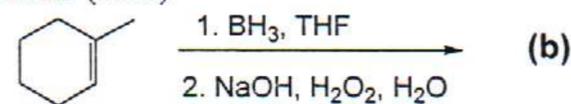
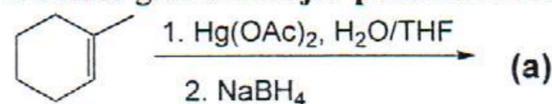
2. Assign E or Z configuration to the following alkenes: (10%)



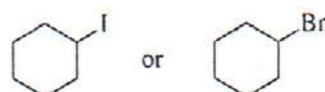
3. Indicate whether each of the following structures has the R or the S configuration: (12%)



4. Please give the **major product** for each of the following reactions: (10%)



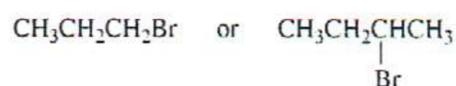
5. (1). Which reacts faster in an $\text{S}_{\text{N}}2$ reaction? (2%)



(a)

(b)

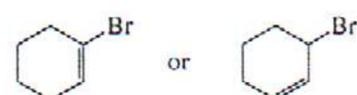
(2). Which reacts faster in an $\text{E}1$ reaction? (2%)



(a)

(b)

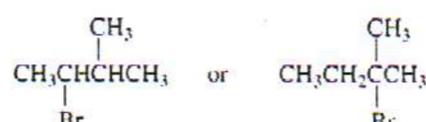
(3). Which reacts faster in an $\text{S}_{\text{N}}1$ reaction? (2%)



(a)

(b)

(4). Which reacts faster in an $\text{E}2$ reaction? (2%)



(a)

(b)

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第2/2頁

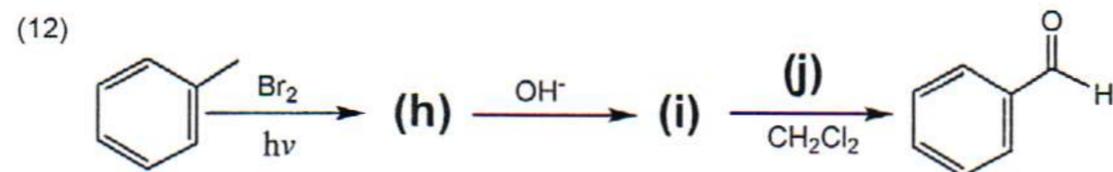
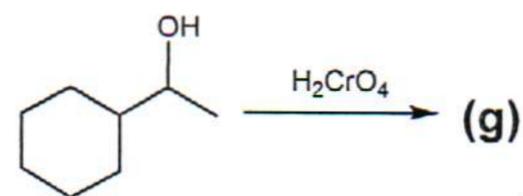
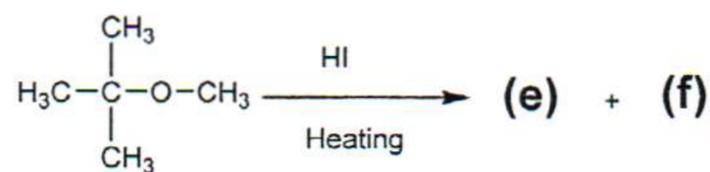
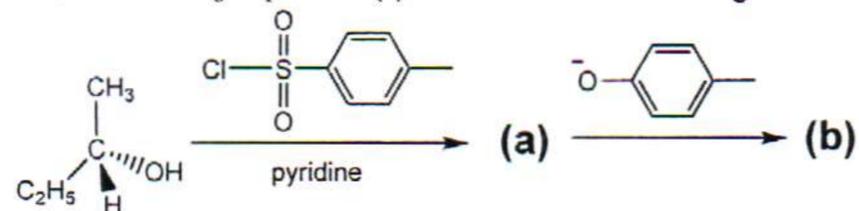
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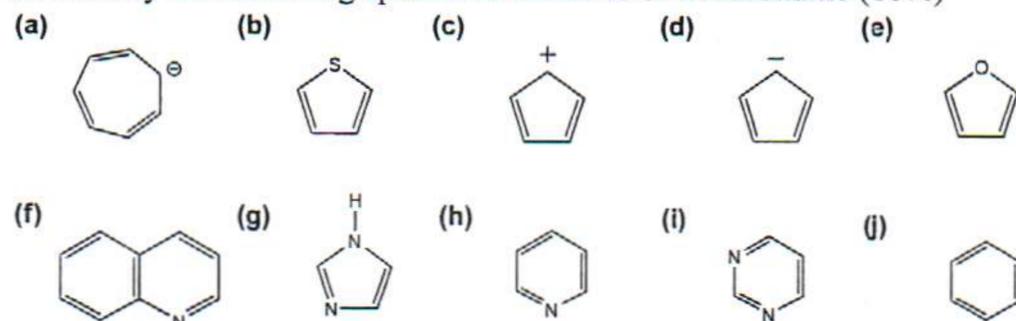
6. Draw the structure as follow: (12 %)

(1) acetone (2) ethanol (3) toluene (4) phenol (5) benzoic acid (6) styrene

7. Give the major product(s) of each of the following reactions: (20%)



8. Classify the following species as aromatic or nonaromatic (10%)



Aromatic:

Nonaromatic:

9. Rank the following substituted phenols in order of increasing acidity. (10% ; 4/3/3)

