

淡江大學 99 學年度碩士班招生考試試題

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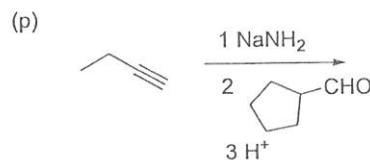
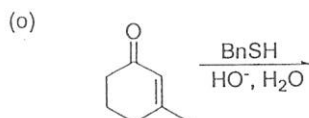
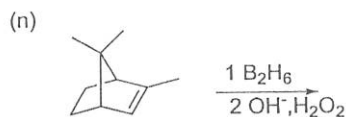
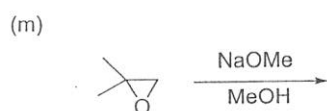
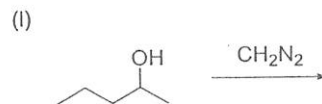
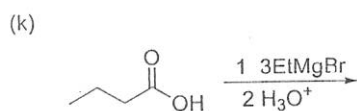
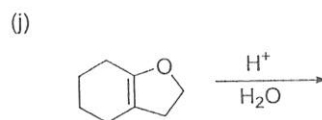
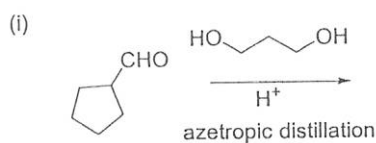
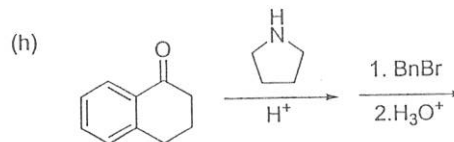
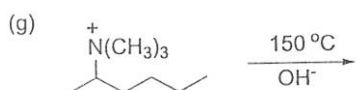
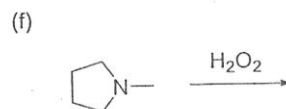
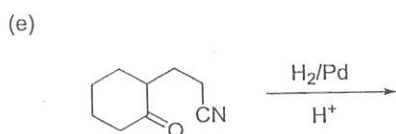
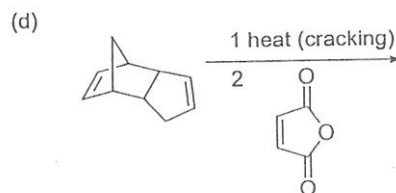
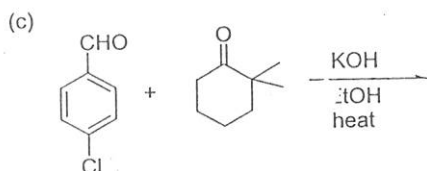
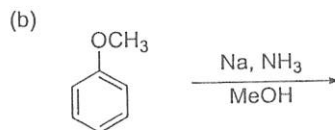
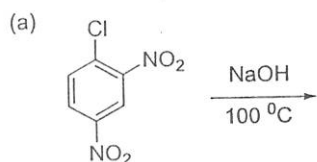
系別：化學學系(化學組、生科組) 科目：有機化學

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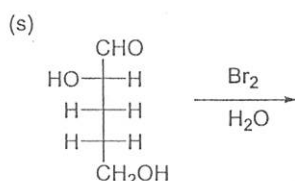
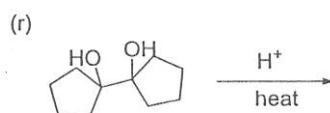
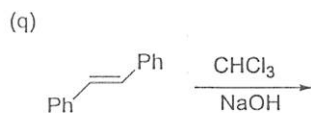
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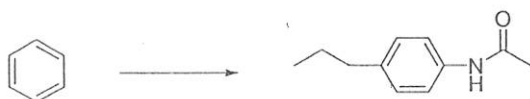
1. Draw the major product you would expect to isolate from each the following reactions. Indicate the stereochemistry if necessary. (60 pt)



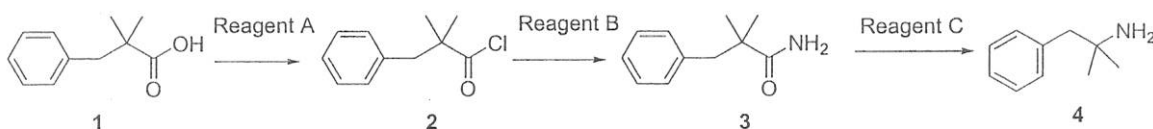
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2. Provide a synthetic strategy to synthesize the target molecule from benzene.(10 pt)



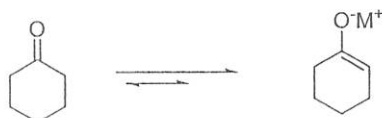
3. Answer questions of the following reaction (10 pt)



(a) What are the reagents A, B and C?

(b) Write the mechanism from the transformation of 3 to 4

4. Which base, LDA or NaOEt, is more efficient to deprotonate the α proton of cyclohexanone? Explain your answer. (8 pt)



5. Based on ^1H NMR spectrum and the following description to answer questions. (12 pt).

Compound A: Chemical formula $\text{C}_{11}\text{H}_{14}\text{O}$. IR: 1687 cm^{-1} (strong). LRMS: 105 (100%). ^{13}C NMR: 14, 22, 26, 38, 128, 129, 133, 137, 200 ppm

(a) What is the structure of compound A?

(b) What functional group does 1687 cm^{-1} represent for?

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(c) Draw the intermediate of 105 in LRMS.

(d) What does "ppm" represent for?

