

靜宜大學 100 學年度碩士班暨碩士在職專班招生考試試題

學系：化粧品科學系

科目：有機化學

Part I :

1. Please draw a structural formula for each of the following compounds. ( Note : Please give the correct stereochemistry, if necessary.) (18 pts)

(a) (*E*)-2-Iodo-2-hexene

(b) *N*-Methylaniline

(c) 3-Ethyl-4-methyl-1-pentyne

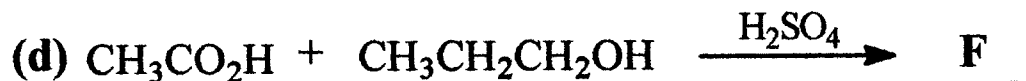
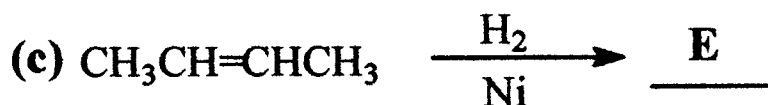
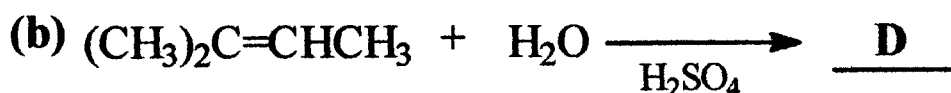
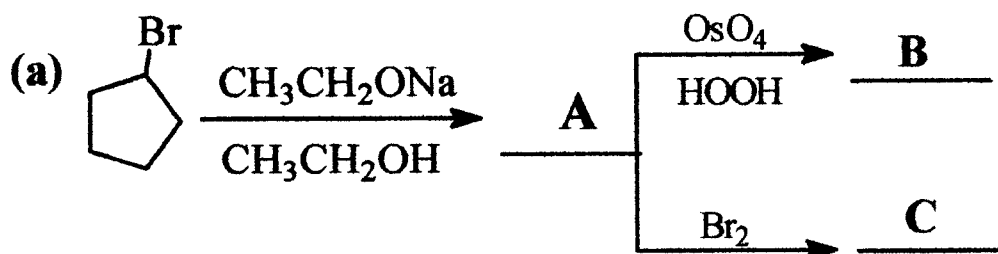
(d) (*R*)-5-Amino-2-hexanone

(e) *m*-Methylphenol

(f) 4-Hydroxy-3-methoxybenzaldehyde

2. Please draw the structural formulas for the six alkenes with molecular formula  $C_5H_{10}$ . ( Note : Please give the correct stereochemistry, if necessary.) (14 pts)

3. Please write the structural formula for the major product in each of the following reactions. (18 pts)



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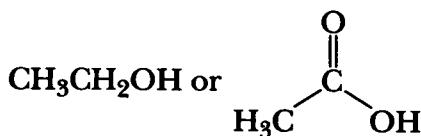
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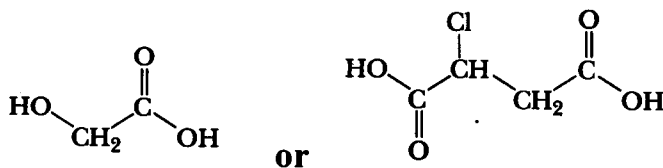
Part II :

1. Indicate the stronger acid in each pair of compounds, and briefly explain why it is more acidic? (2%, 3%, each)

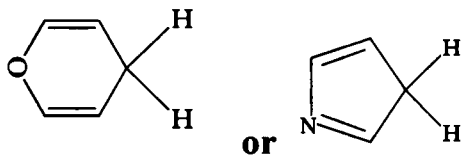
(i)



(ii)

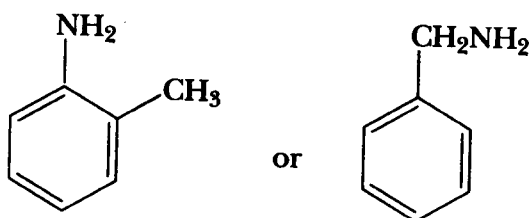


(iii)

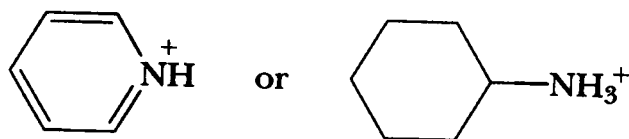


2. Indicate the stronger base in each pair of compounds, and briefly explain your choice? (2%, 3%, each)

(i)

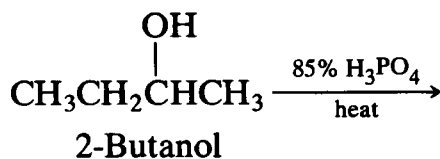


(ii)



3 Predict the major product of the following reaction (5%, each)

(i)

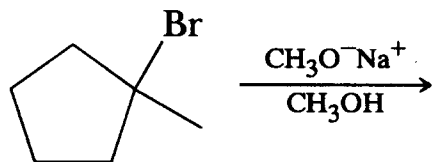


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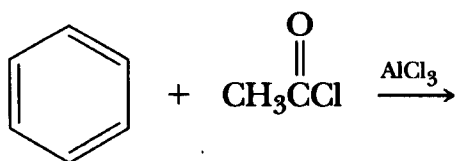
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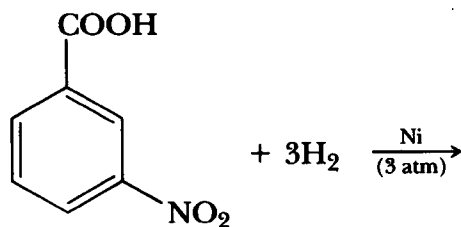
(ii)



(iii)



(iv)



(v)

