



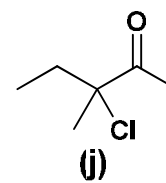
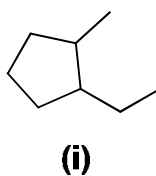
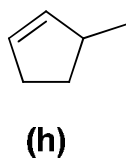
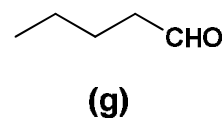
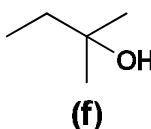
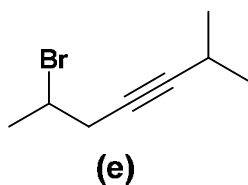
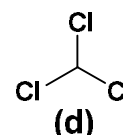
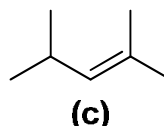
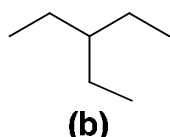
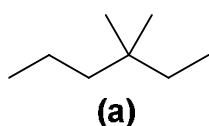
First Year (Natural Science) (Enrolled
to Repeat)
Organic Chemistry (Chem-103)
May 2012

Faculty of Science
Chemistry Department
New Damietta

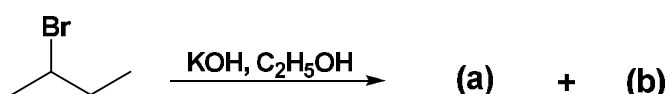
Answer the following questions: (3 hours) (90 marks)

(exam in 3 papers)

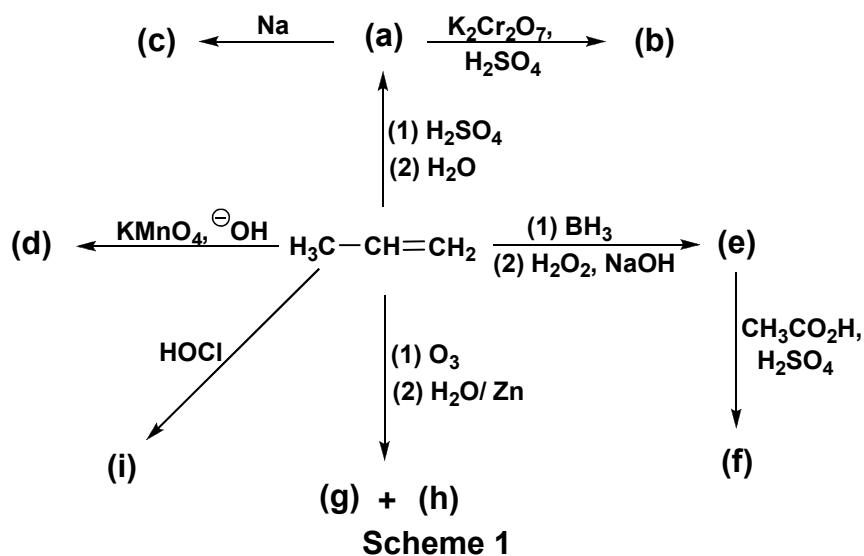
(1) (i) Write the IUPAC names of the following compounds: (20 marks)



(ii) In the following reaction, write all the possible products and specify the major one and give the reason for your choice. (3 marks)



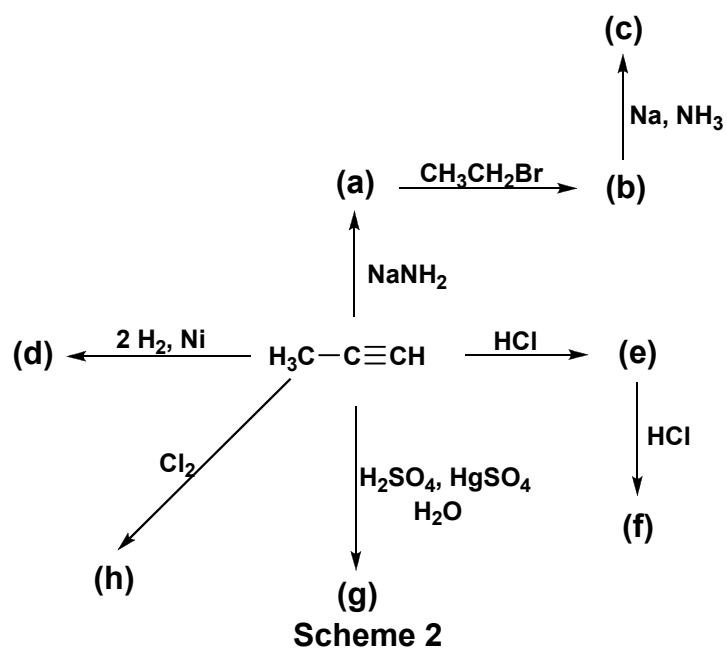
(iii) Complete the following Scheme 1: (14 marks)



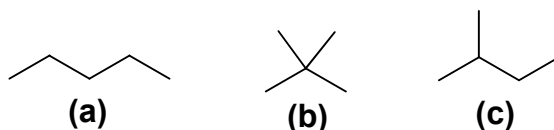
(2) (i) Write the structures for the following compounds: (13 marks)

- | | |
|----------------------------|----------------------------|
| (a) Pentan-3-ol | (b) 4-Ethyl-2-methylhexane |
| (c) 4,4-Dimethyl-1-pentene | (d) 2-Chloro-1-butene |
| (e) 3-Methyl-1-butyne | (f) 3-Methylbutanoic acid |
| (g) Ethyl methyl ether | (h) 2-Methyl-1,3-butadiene |
| (i) Ethyl methyl acetylene | (j) <i>trans</i> -2-Butene |

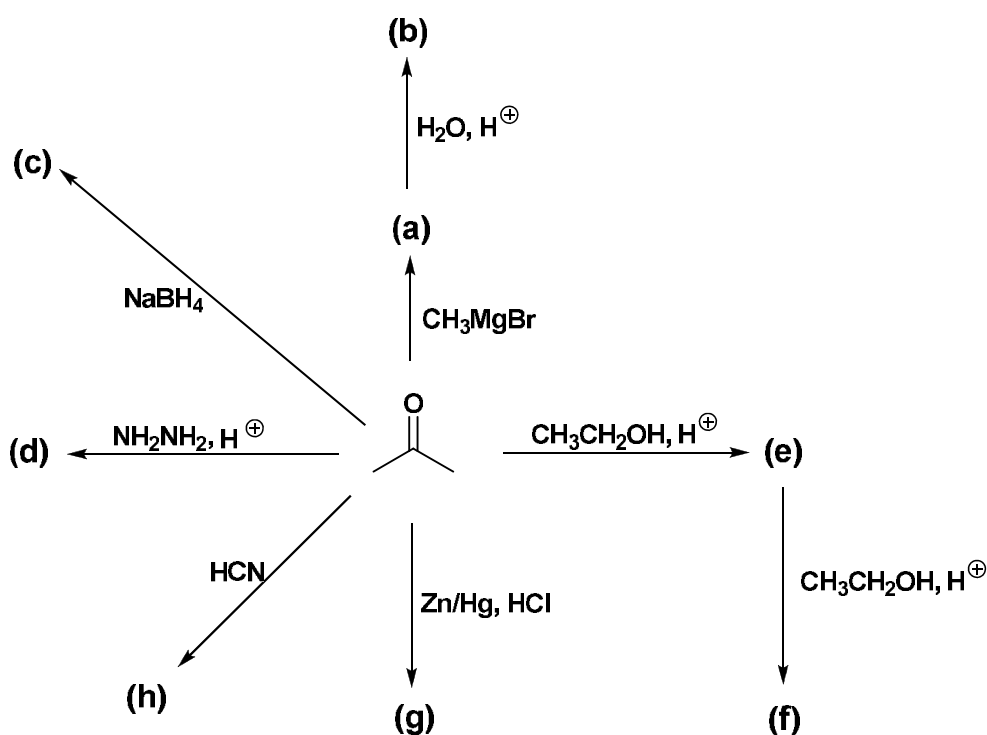
(ii) Complete the following Scheme 2: (12 marks)



(3) (i) **Arrange** the following compounds in order of **increasing boiling points** and **give the reason** for your choice (3 marks)



(ii) **Complete** the following Scheme 3: (13 marks)



Scheme 3

(iii) **Convert** (12 marks)

- (a) Ethene to ethyne
- (b) 1-Chloropropane to 2-chloropropane
- (c) 1-Propanol to 1,2-dichloropropane
- (d) 1-Chloropropane to propanoic acid