

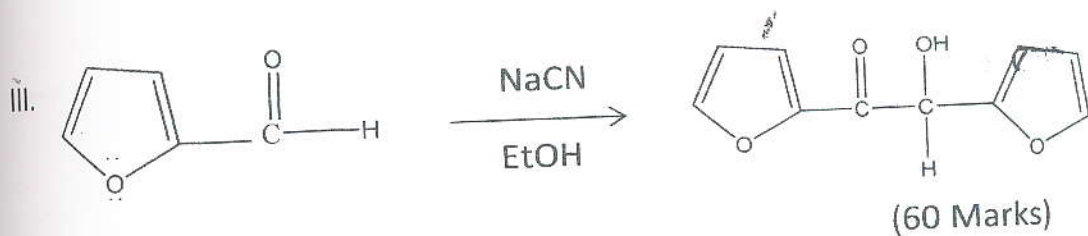
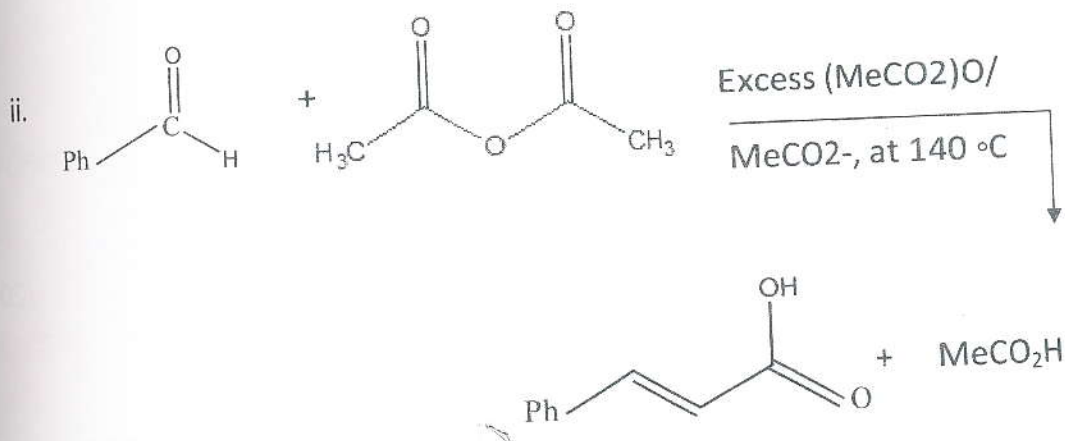
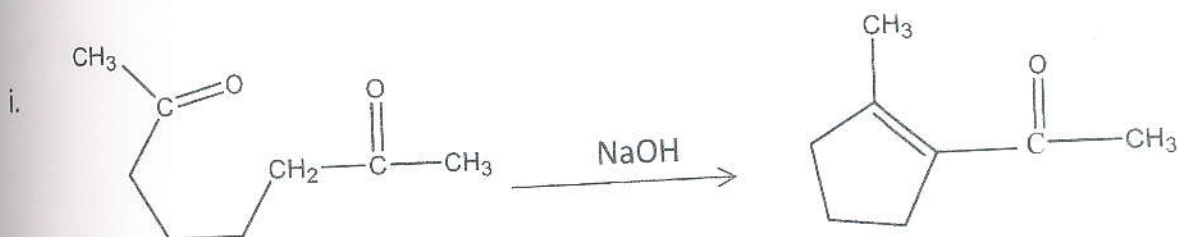


EASTERN UNIVERSITY, SRI LANKA
SECOND YEAR FIRST SEMESTER EXAMINATION IN SCIENCE
2013/2014 (FEBRUARY /MARCH 2016)
CH-204 REACTION MECHANISM AND AROMATICITY
(PROPER)

Time allowed: One hour

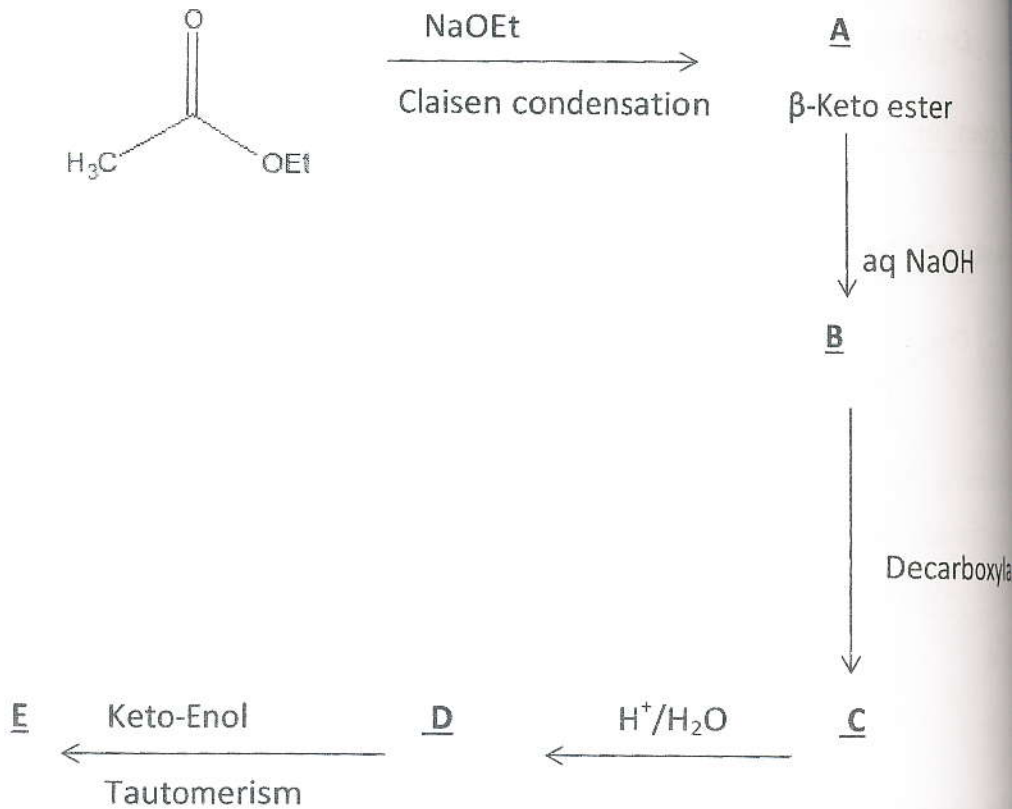
Answer all questions.

1) (a) Write a suitable mechanism for the following reactions.

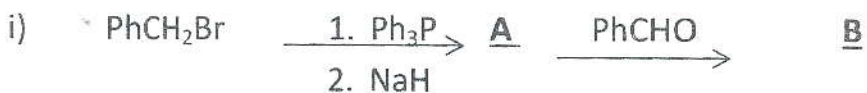


Contd...

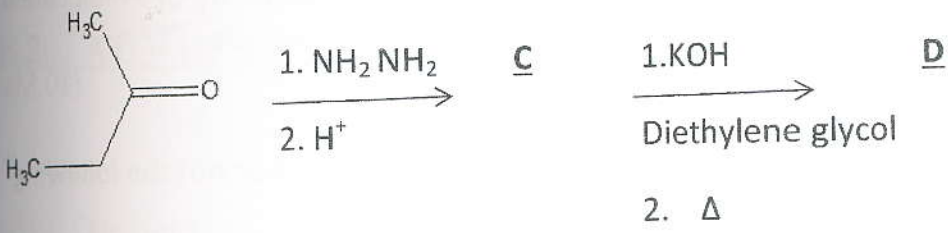
b) Give the structure for compounds **A**, **B**, **C**, **D** and **E**



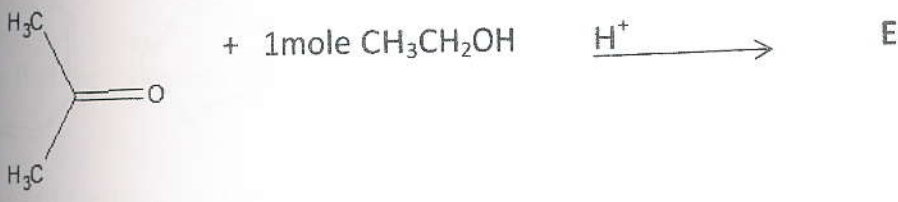
c) Write down the possible product/s for the following reactions.



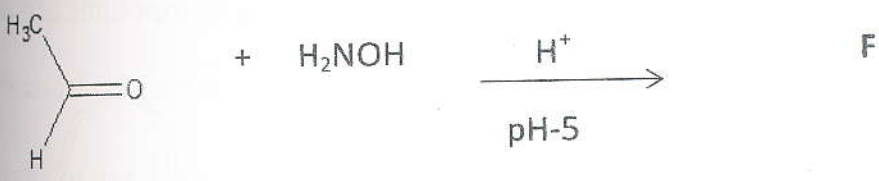
ii)



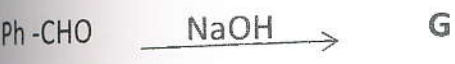
iii)



iv)



v)



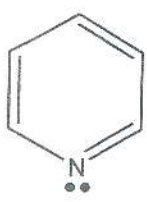
(20 Marks)

Contd....

2) a) (i) What is 'Huckel rule' for predicting aromaticity of a molecule describe the criterias for aromaticity under this rule.

(10 M)

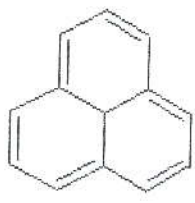
(ii) Using the above rule determines whether or not the following molecules are aromatic.



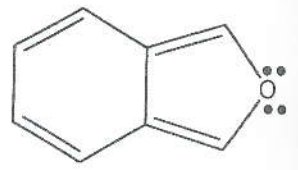
A



B



C



D

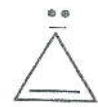
b) Using polygon & circle method, explain the following compounds are aromatic or not.

(25 M)

i) Cycloheptatrienyl cation / Tropylium cation



ii) Cyclopropenyl anion



(30 M)

c) i) Write down the chemical structure of naphthalene and number in it.

(10 M)

ii) Give the product formed by the oxidation of naphthalene with the following reagents:

1. CrO_3 / acetic acid
2. O_2 / V_2O_5 , heat.

(10 M)

d) Write the following reaction of naphthalene and give the product.

1. Sulphonation of naphthalene with H_2SO_4 , at 80°C
2. Nitration of naphthalene with $\text{Con. H}_2\text{SO}_4$, Con. HNO_3 , at 60°C
3. Halogenation of naphthalene with Br_2/CCl_4 , Boiling

(15 M)

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