



Reg. No.

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THE OPEN UNIVERSITY OF SRI LANKA
B.Sc. Degree Programme
and Stand Alone Courses in Science - 2013/2014
CMU2221/CME4221 - Organic Chemistry I
CONTINUOUS ASSESSMENT TEST III

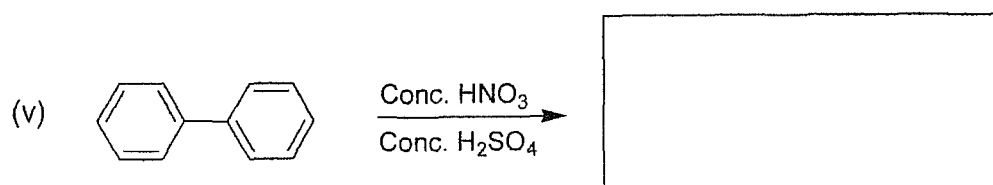
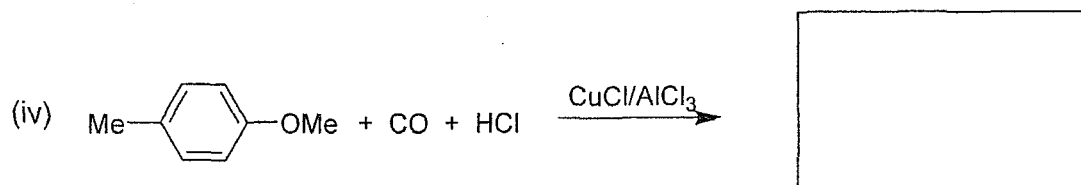
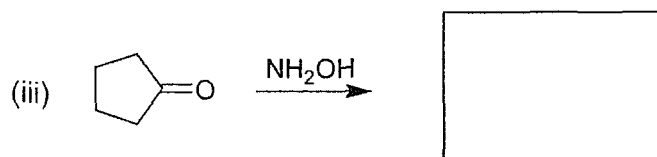
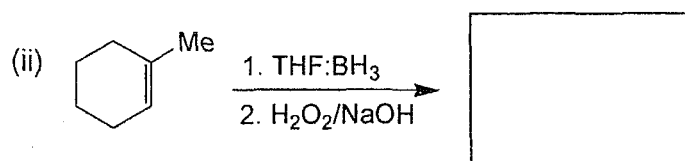
Ques No.	Max.	Marks
1	56	
2	44	
Total	100	

Thursday 25th September 2014

4.00 p. m. – 5.00 p. m.

ANSWER ALL QUESTIONS

1. (a) Give the products of each of the following reactions.

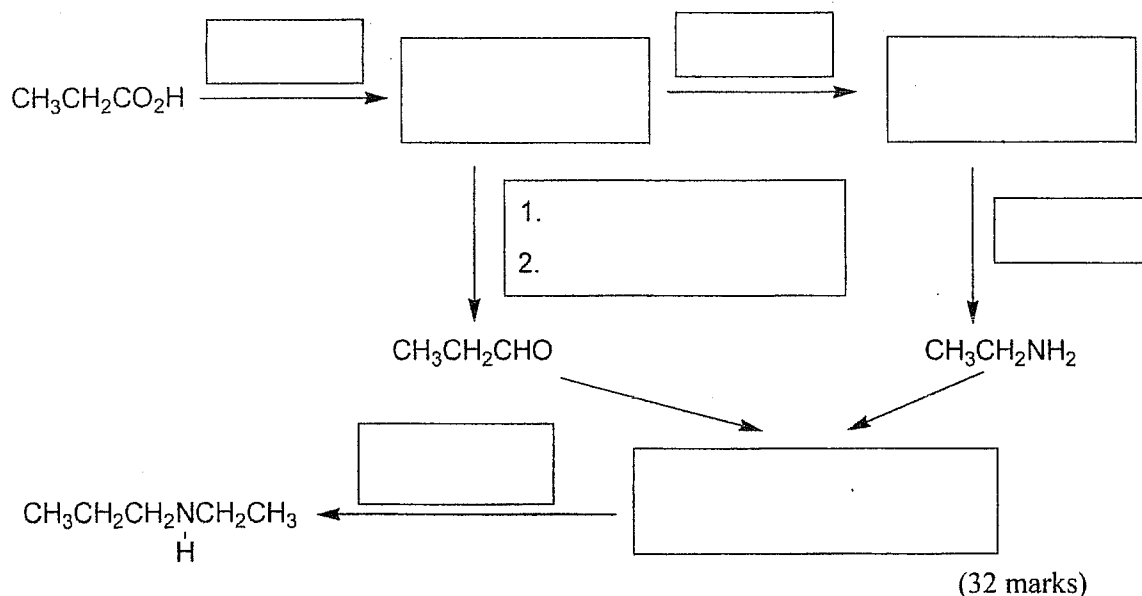


(24 marks)

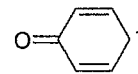
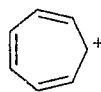
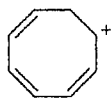
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(b) Giving the missing reagents and structures of compounds complete the reaction scheme given below.



2. (a) Giving reasons, determine whether each of the following cation is aromatic, non-aromatic or anti-aromatic.



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.....
.....
.....

(12 marks)

(b) Giving appropriate reagents and conditions show how you would carry out the following conversions.

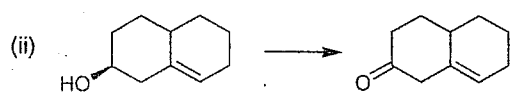


Hint: Consider the stereochemistry of the product

(12 Marks)

Reg. No.

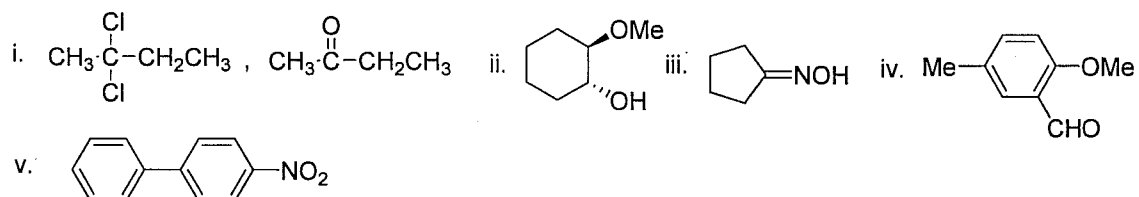
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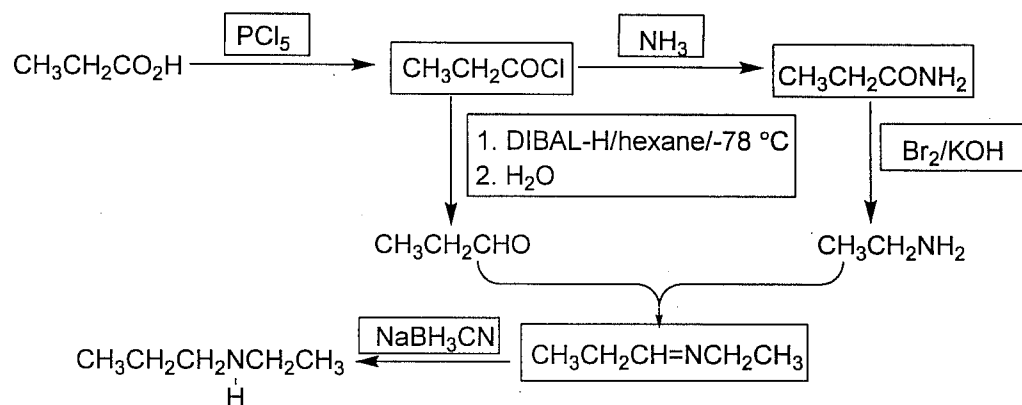
Hint: Double bond can migrate during oxidation.

(20 Marks)

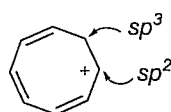
1. (a)



(b)

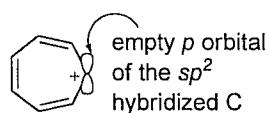


2. a)



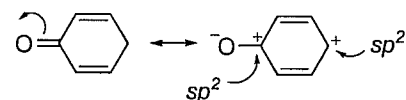
Non-aromatic

Huckel no. of π electrons
($4n+2$) but no conjugation
due to sp^3 carbon.



Aromatic

($4n+2$) π electrons in a planar,
monocyclic closed shell due to
empty p orbital. Obeys Huckel rule.



Anti-aromatic

($4n$) number of π electrons in a planar,
monocyclic closed ring formed by two
empty p orbitals on sp^2 hybridized C

(b)

