Reg No: | | | | | | | | | | |

The Open University of Sri Lanka
B.Sc Degree /Stand Alone Programme 2011/2012
Organic Chemistry II –CMU3120
Level 5- Continuous Assessment Test I
Duration 1½ Hours

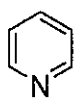
Q	Marks	
	Max	Awarded
1	50	
2	35	
3	30	
Total		

Tuesday, 6th September 2011 **Time: 4.00 p.m. – 5.30 p.m.**

Answer all questions.

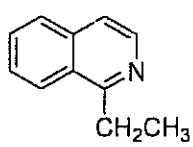
Maximum marks allocated to this paper are 115. However a candidate who scores 100 marks or above will be awarded 100% and those scoring less will be awarded the score they make.

1. i Draw resonance structures for pyridine.



ii. Explain why piperidine is more basic than pyridine.

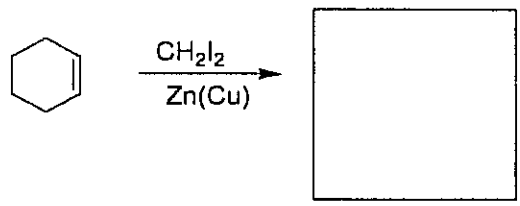
iii. Outline the reaction pathway of the Bischler- Napieralskic synthesis for the following compound (use appropriate starting materials).



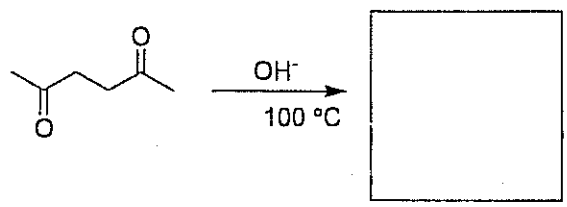
(50 Marks)

2. Give the products of the following reactions.

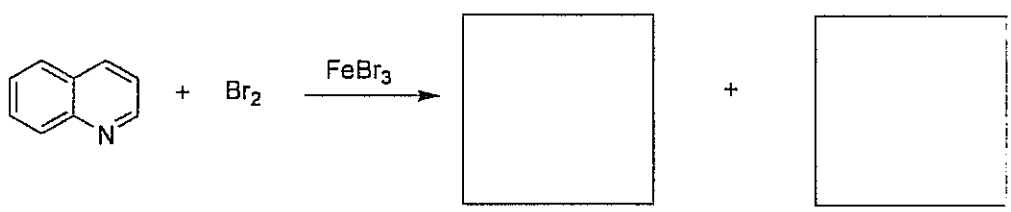
i.



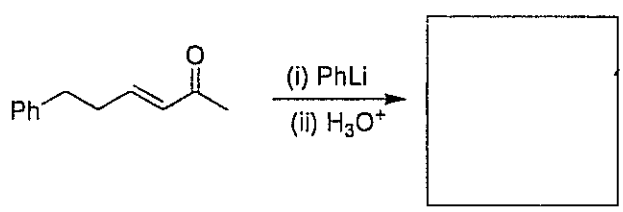
ii.



iii.



iv.



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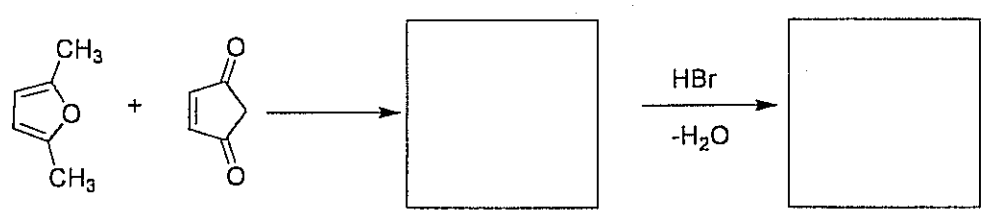
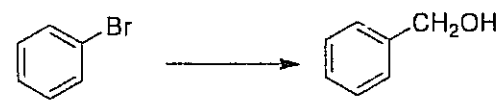


(35 Marks)

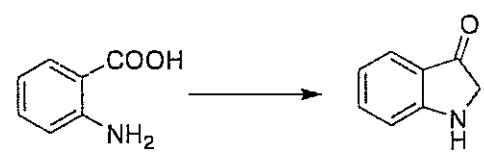
3. Giving necessary reagents and conditions show how you would carry any **three** (**03**) of the following conversions.

i.

ii.



iii.



iv.

(**30** Marks)

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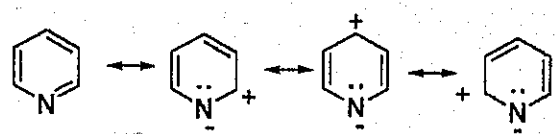
Answer Guide

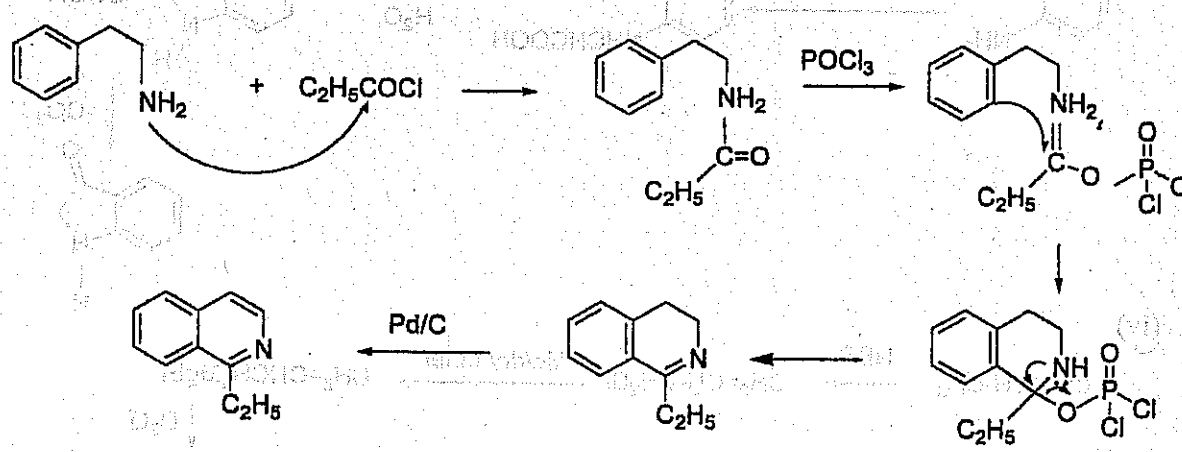
1. (i).



(ii).

In piperidine sp^2 hybridized orbital occupies unshared pair of electrons on N. Its unshared pair of electrons not delocalized But in piperidine nitrogen has high density of electrons as sp^3 hybridized orbital occupies unshared pair of electrons. This would results in more attraction of H^+ ions. Due to that piperidine is more basic than pyridine

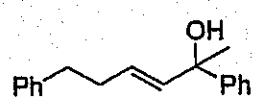
(iii)



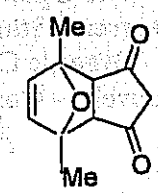
2.

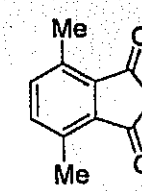
(i) (ii) (iii)

(iv)



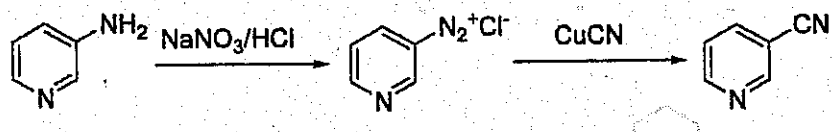
(v)



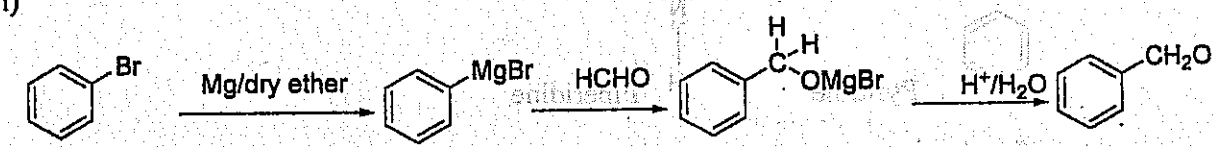


3.

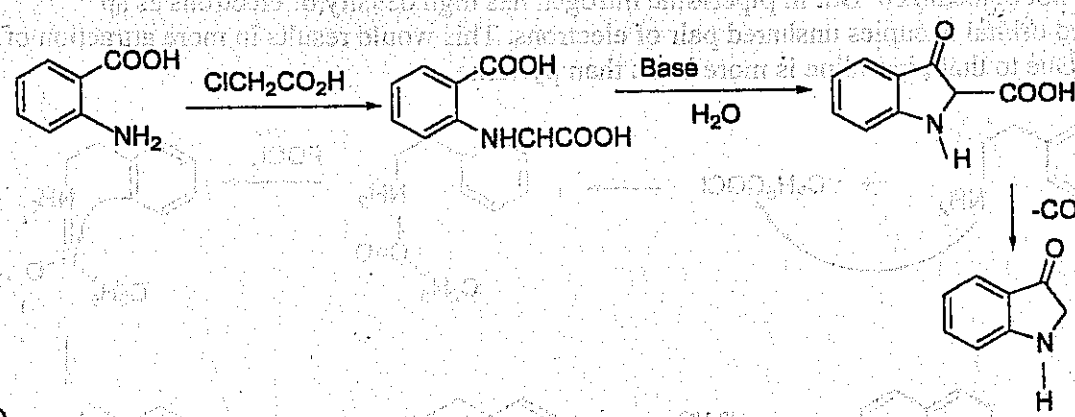
(i)



(ii)



(iii)



(iv)