

Reg. No:

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The Open University of Sri Lanka
 B. Sc Degree / Stand Alone Programme 2008/2009
 Organic Chemistry - CHU 3126 / CHE 5126
 Level 5 - Assignment II - Test
 Duration 1½ hours

Q	Marks	
	Max	Awarded
1	30	
2	30	
3	25	
4	20	
Total		

Thursday, 05th March 2009

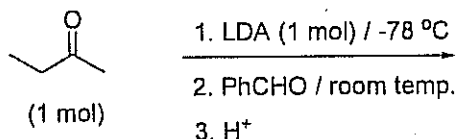
4.00 – 5.30 p.m.

Answer all questions.

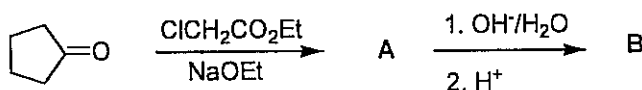
Maximum marks allocated to this paper are 105. However a candidate who scores 100 marks or above will be awarded 100% and those scoring less will be awarded the score they make.

1. (a) Giving reasons predict the product of the following reaction.

(10 Marks)



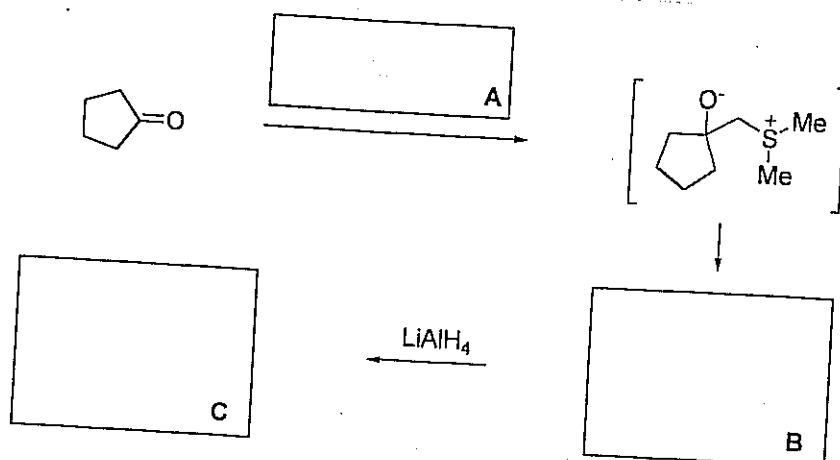
- (b) Giving appropriate mechanism, predict the products A and B of the following reaction.



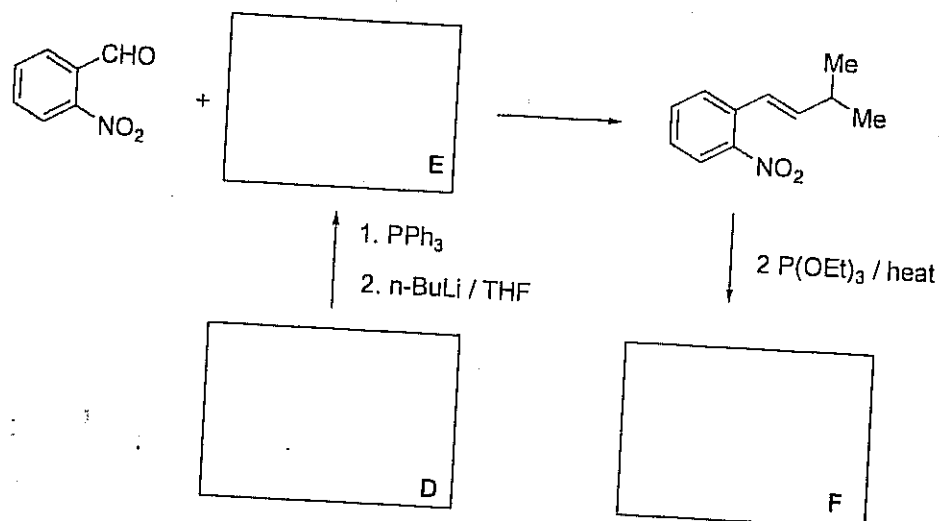
(20 Marks)

2. (a) Give the structures of compounds / reagents (A – F) of the following reaction schemes (30 Marks)

(i)

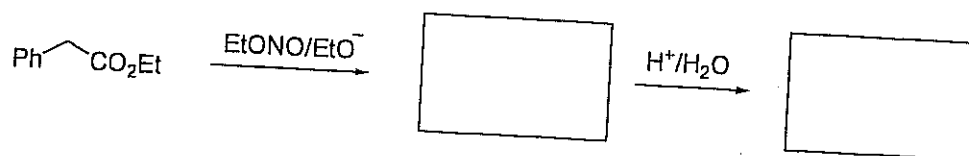


(ii)



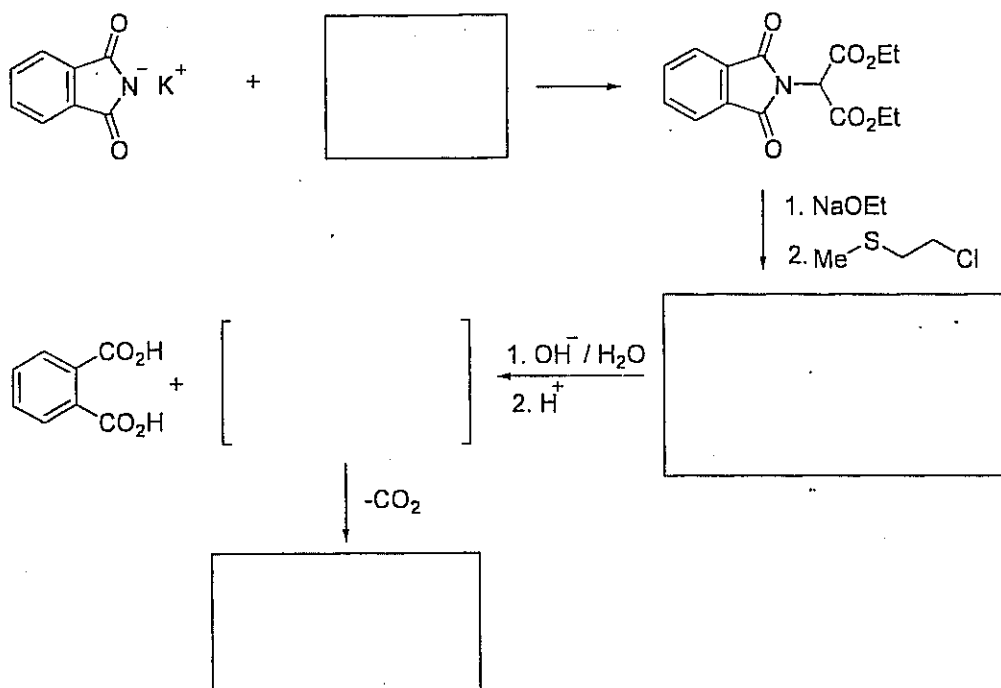
3. Give the structures of missing compounds in the following reaction schemes.

(a)



Reg. No:

(b)



(25 Marks)

4. Show how you would synthesize cyclobutanone using the following compounds and reagents.

You may need some other reagents too.

HCHO

HS-CH₂-CH₂-CH₂-SH

Br-CH₂-CH₂-CH₂-Br

n-BuLi

H₃O⁺/Hg²⁺

(20 Marks)





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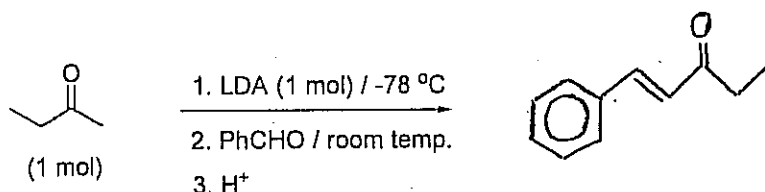
Answer Grade

Answer all questions.

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1. (a) Giving reasons predict the product of the following reaction.

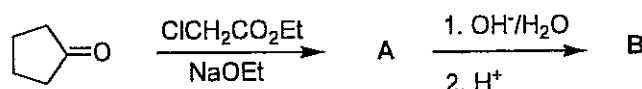
(10 Marks)



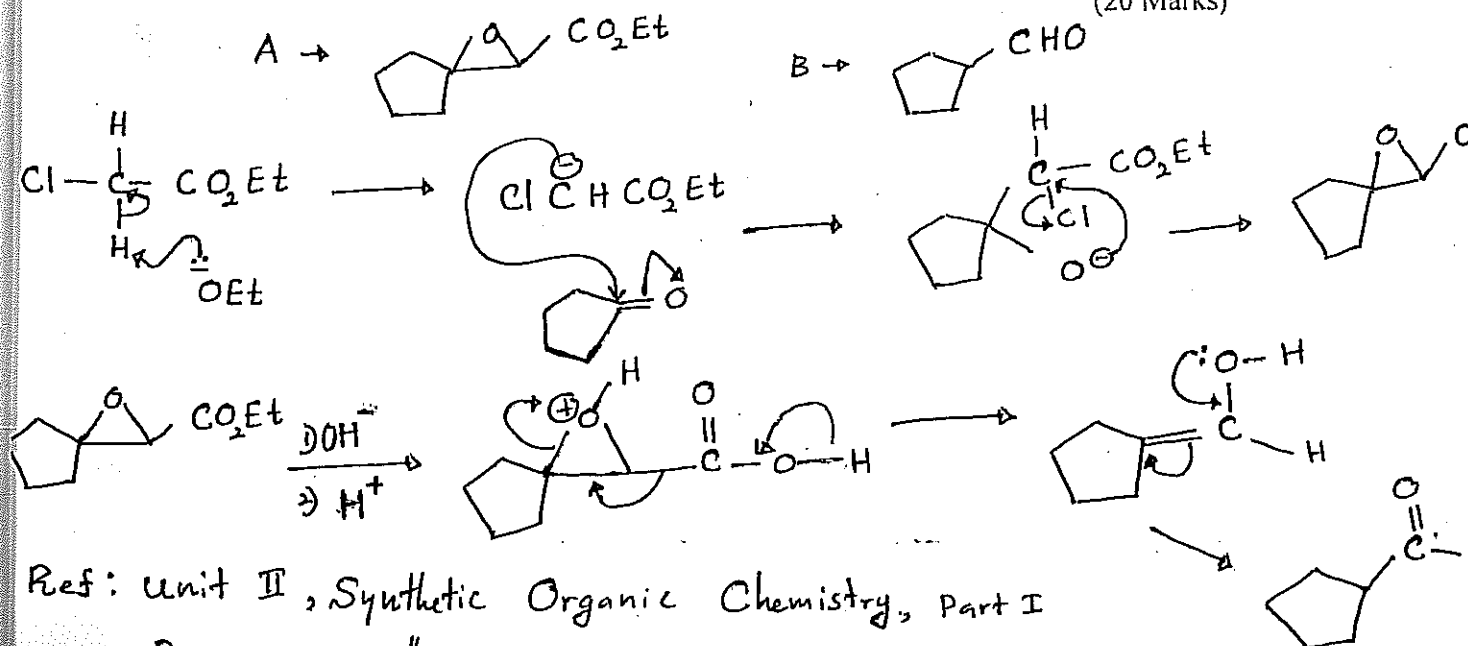
Carbanion is formed from the less hindered α -C atom.

Ref: Unit II, Synthetic Organic Chemistry, Part I
Page 44.

- (b) Giving appropriate mechanism, predict the products A and B of the following reaction.



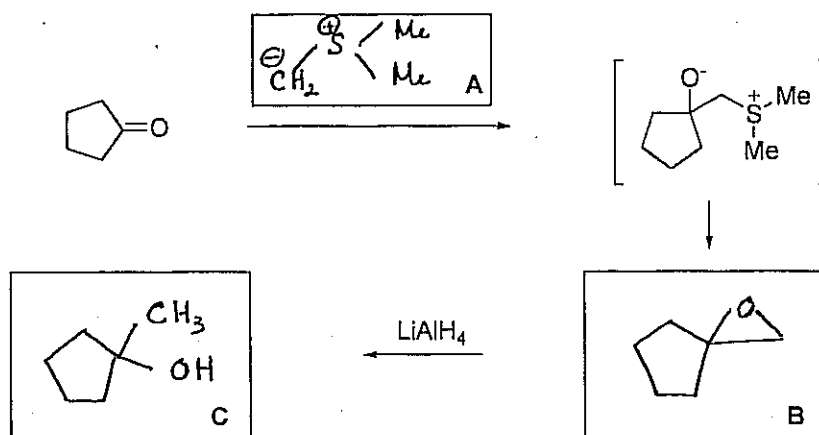
(20 Marks)



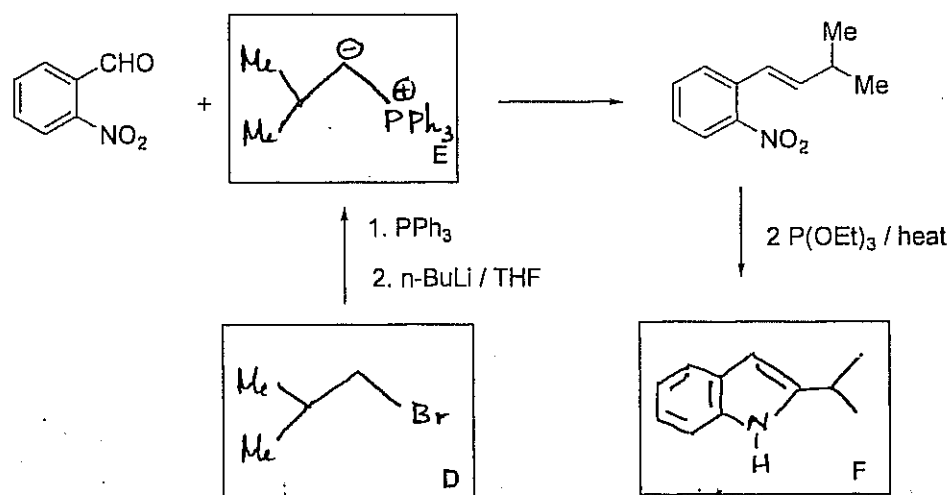
Ref: Unit II, Synthetic Organic Chemistry, Part I
Page 51, "Darzens Reaction"

2. (a) Give the structures of compounds / reagents (A – F) of the following reaction schemes (30 Marks)

(i)

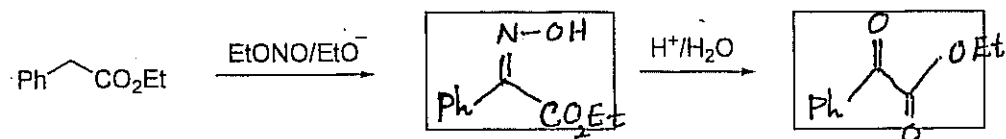


(ii)

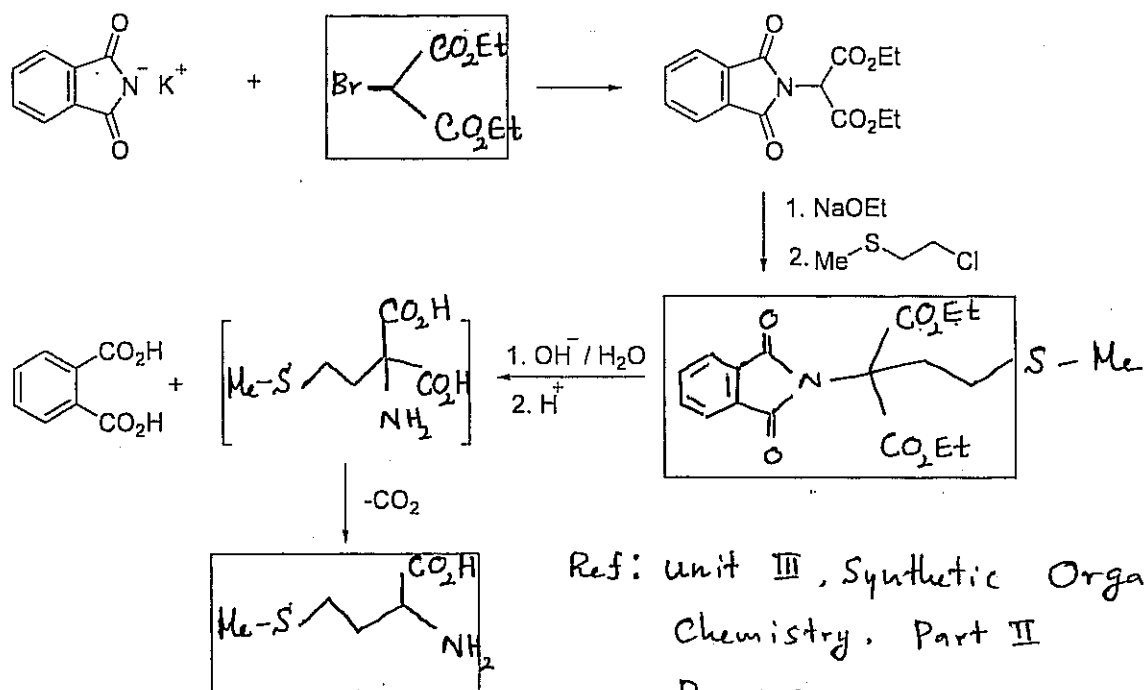


3. Give the structures of missing compounds in the following reaction schemes.

(a)



(b)

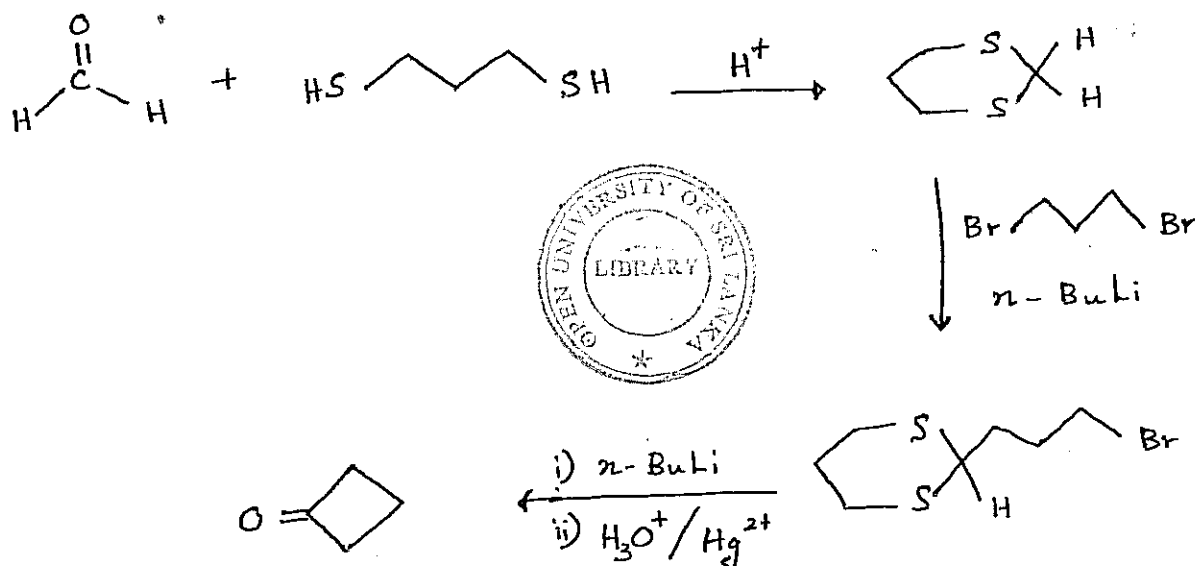
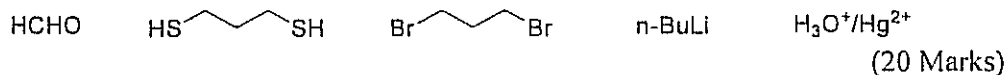


Ref: unit III, Synthetic Organic Chemistry, Part II

Page: 37 (25 Marks)

4. Show how you would synthesize cyclobutanone using the following compounds and reagents.

You may need some other reagents too.



Ref: unit II, Synthetic Organic Chemistry, Part I

Page 63-64.