

Name:

Enrolment No:



UPES

End Semester Examination, December 2024

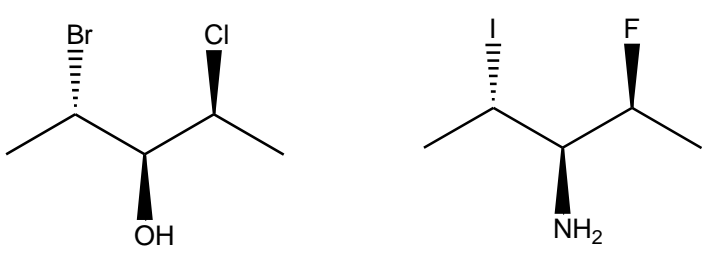
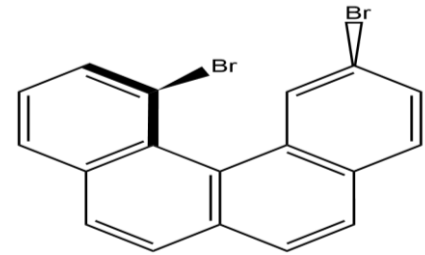
Course: Organic Reaction Mechanism
Program: B.Sc. (H) Chemistry by Research
Course Code: CHEM4013

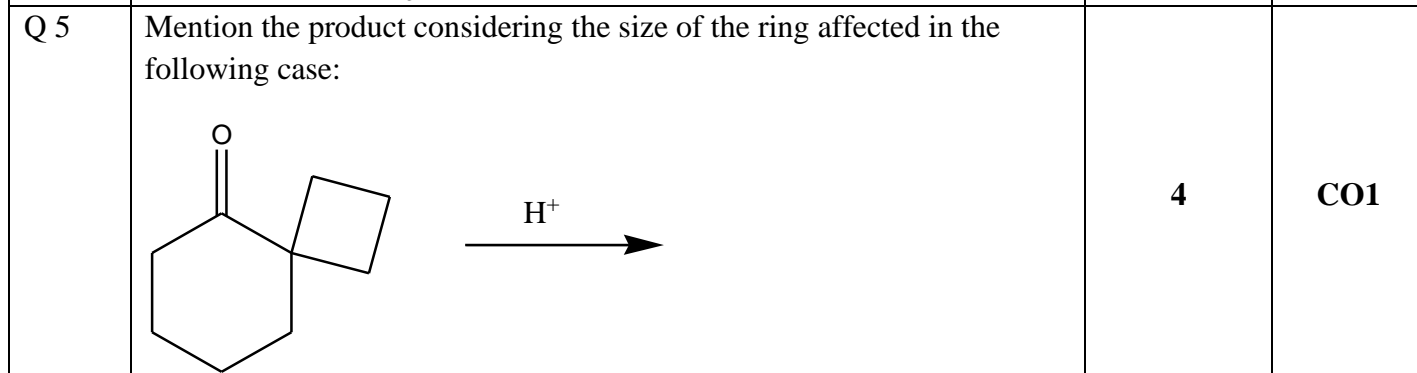
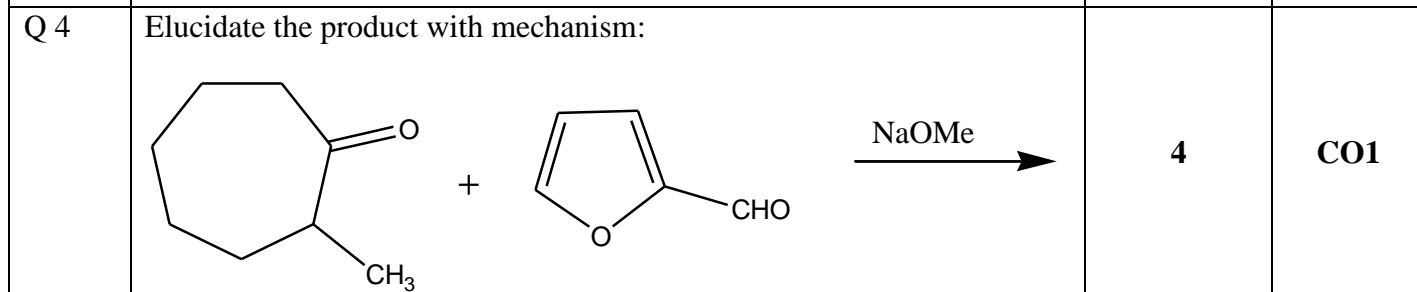
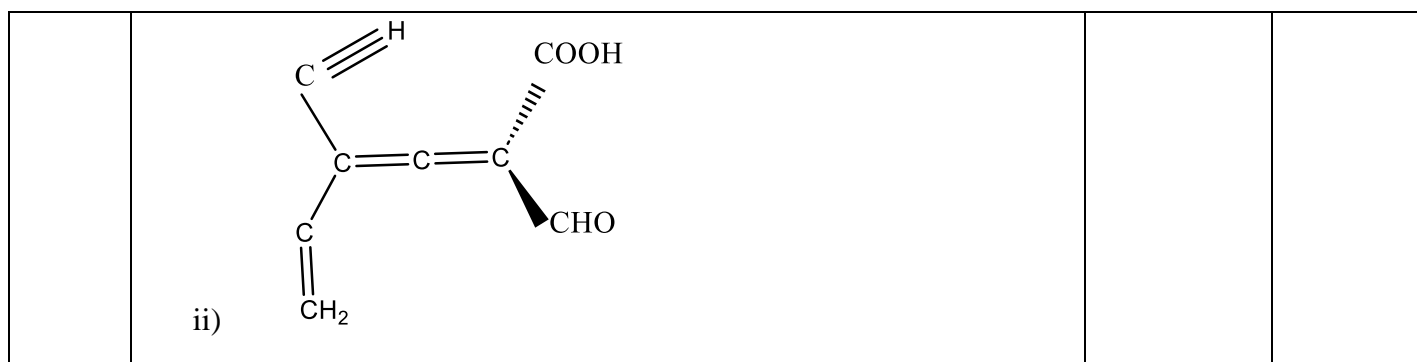
Semester: VII
Time : 03 hrs.
Max. Marks: 100

Instructions:

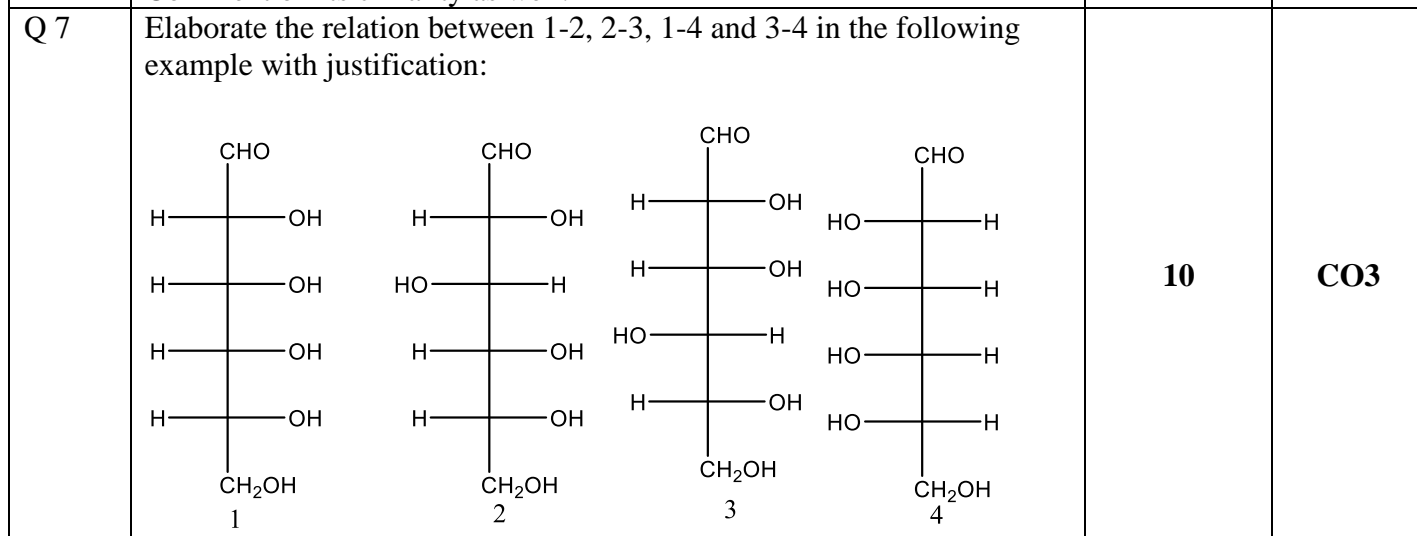
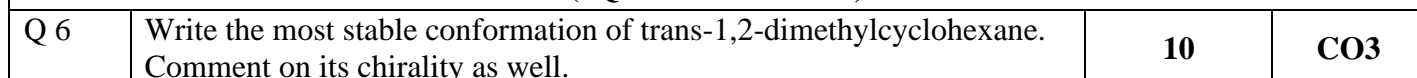
1. Write your enrolment number on the top left of the question paper.
2. Do not write anything else on the question paper except your enrolment number.
3. Attempt all parts of a question at one place only.
4. Internal choice is given for Question 9 of Section B and Question 11 of Section C only.

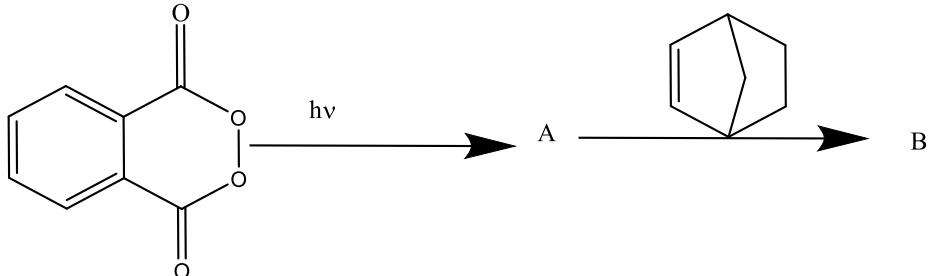
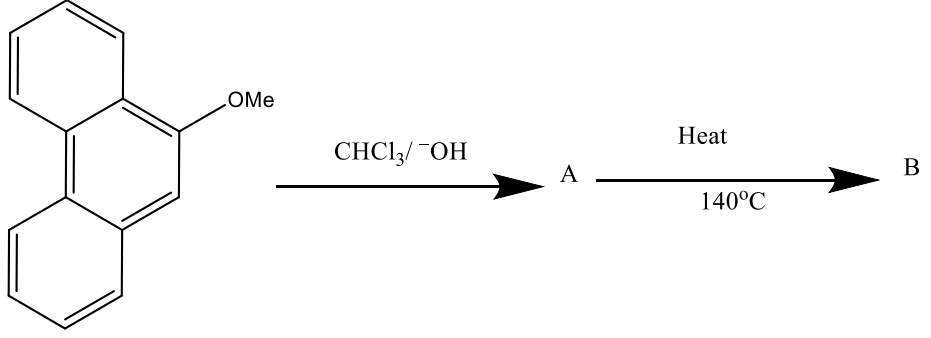
SECTION A
(5Qx4M=20Marks)

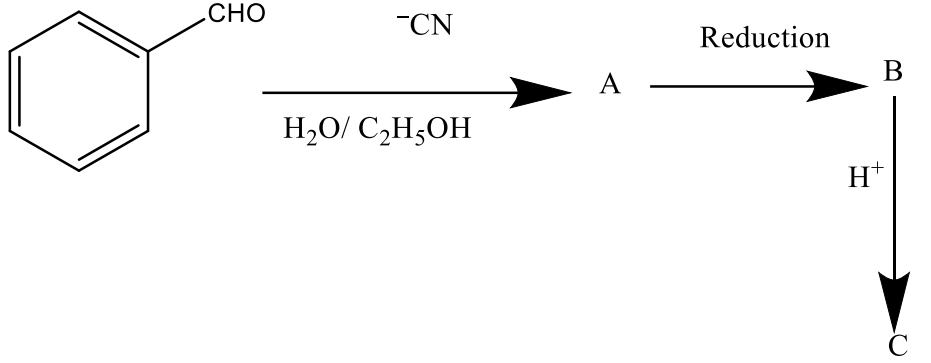
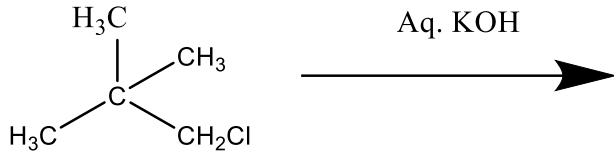
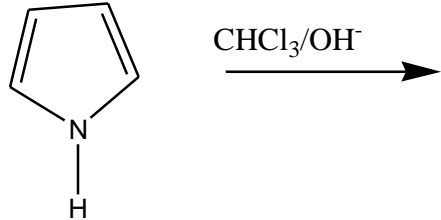
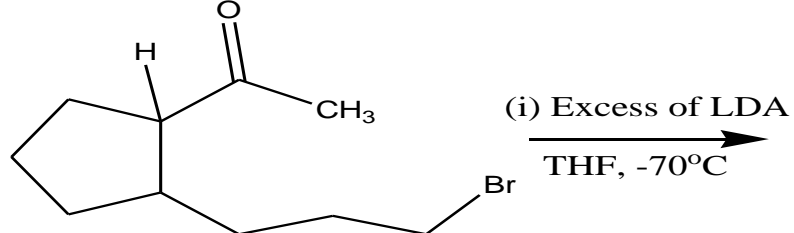
S. No.		Marks	CO
Q 1	Draw Fischer projection of the following compounds: 	4	CO2
Q 2	Discuss CIP rules for assigning R and S-configuration to the organic molecules.	4	CO3
Q 3	Assign R and S configuration in the following compound:  i)	4	CO1



SECTION B
(4Qx10M= 40 Marks)



Q 8	<p>Complete the following reaction sequence along with mechanism for II step:</p> 	10	CO1
Q 9	<p>Mention the products A and B in the following reaction with mechanism of both the steps:</p>  <p style="text-align: center;">OR</p> <p>Write the short notes on the following:</p> <ul style="list-style-type: none"> (a) Axial chirality (b) Spiranes (c) Allene (d) Ansa compounds 	10	CO2
<p>SECTION-C (2Qx20M=40 Marks)</p>			
Q 10	i) Mention the products in the following reaction sequence with mechanism of all the steps:	10+ 10	CO1

	 <p>ii) Write various methods for generation of benzyne intermediate. Also discuss its structure and few important reactions.</p>		
<p>Q 11</p>	<p>i) Elaborate all the possible products of the following reaction with the mention of major product and mechanism.</p>  <p>ii) Complete the reaction and discuss the mechanism.</p>  <p style="text-align: center;">OR</p> <p>i) Discuss the structure and stereochemistry of cis-decalol.</p> <p>ii) Complete the reaction with mechanism:</p> 	<p>10+ 10</p>	<p>CO3</p>