Name **Enrolment No:**	UPES

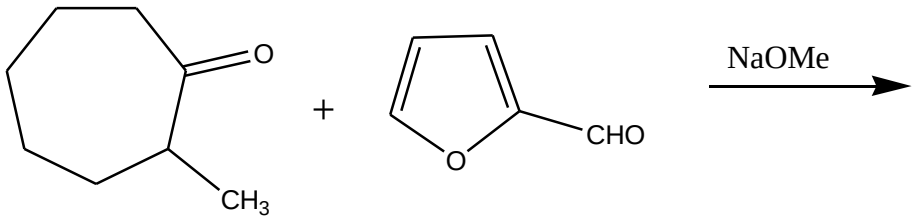
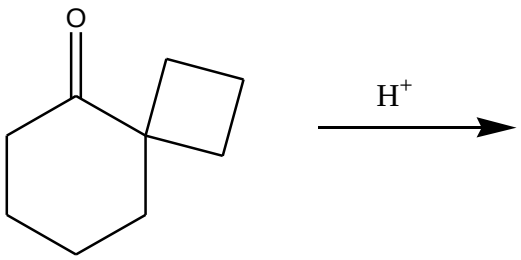
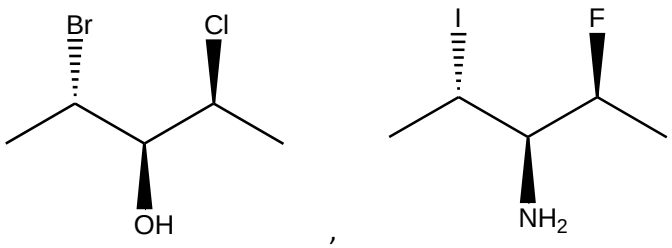
Course: CHEM-7002 **(End Semester Examination Dec 2019)**
Programme: M.Sc Chemistry **Semester: I**
Course Name: Organic Reaction Mechanism & Stereochemistry

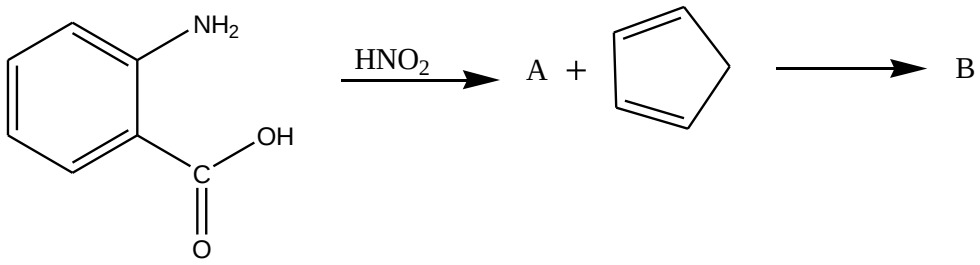
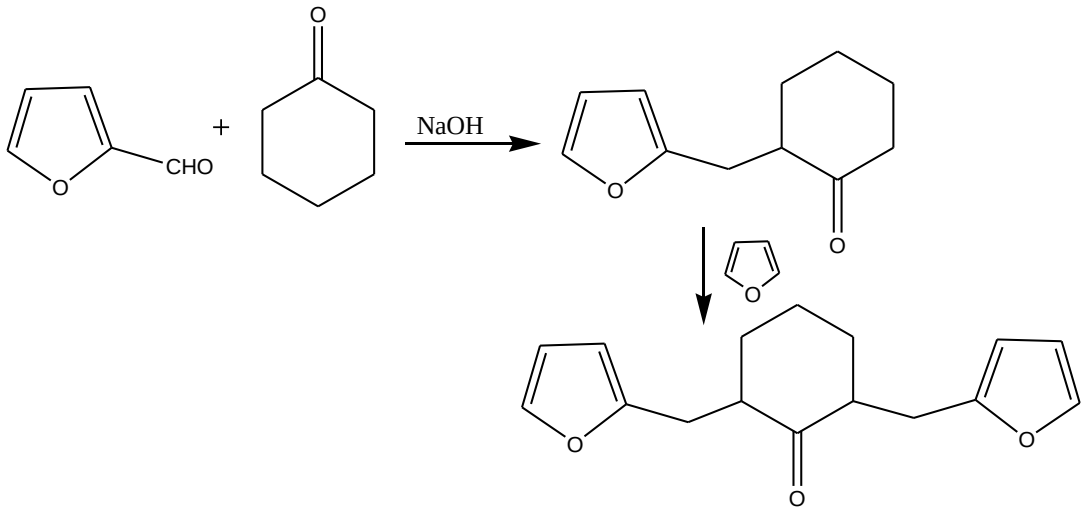
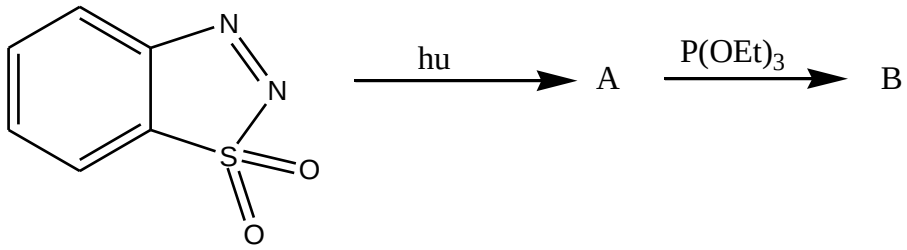
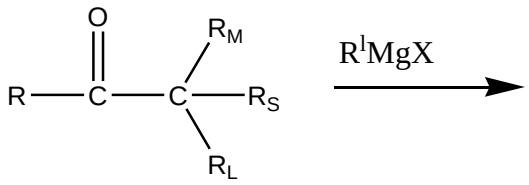
Time: 03 hrs. **Max. Marks:100**

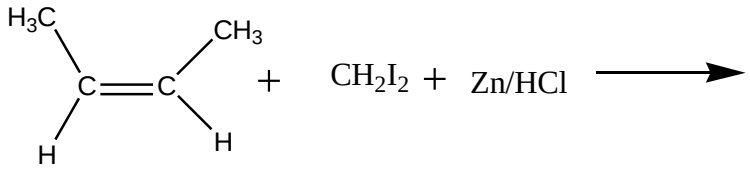
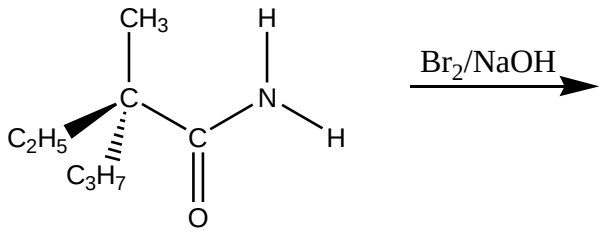
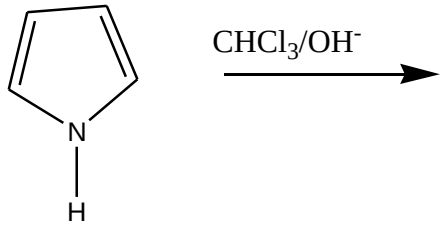
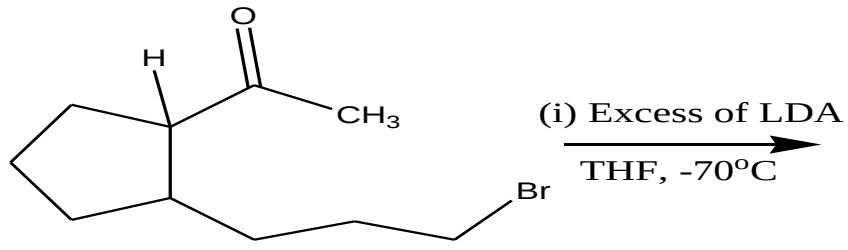
Instructions: Read all the below mentioned instructions carefully and follow them strictly:

1) **Write your enrolment number on the top left of the question paper**
2) **Do not write anything on the question paper except your enrolment number**
3) **Attempt all part of a question at one place only**
4) **Internal choice is given for question number 9 and 11 only**

Section - A (Attempt all **FIVE** Questions**)**

1.	Elucidate the product with mechanism 	**[4]**	**CO1**
2.	Explain the product with mechanism 	**[4]**	**CO1**
3.	Draw Fischer projection of following compounds 	**[4]**	**CO2**
4.	Discuss any two methods for determination of mechanism of reaction	**[4]**	**CO1**
5.	Show the hydride attack from lithium aluminum hydride from Re and Si face of 2-butanone.	**[4]**	**CO3**

	SECTION-B **(Question No. 6, 7 and 8 are Compulsory); attempt any one from 9A & 9B**		
6.	Mention product A and B in the following reaction with mechanism  	**[10]**	**CO2**
7.	Discuss the mechanism of the following reaction  	**[10]**	**CO2**
8.	Mention product A and B in the following reaction with mechanism  	**[10]**	**CO1**
9.A	i) Predict the product with proper reasoning and mechanism  ii)Predict the hydrogen atoms in cis-1,2 dichlorocyclopropane as homotopic, enantiotopic and diastereotopic	**[5+5]**	**CO2 & CO3**

	OR		
9B	i) Deduce product with mechanism  ii) Write the most stable conformation of trans-1,2-dimethylcyclohehane, is it chiral?	**[5+5]**	**CO2 & CO3**
	SECTION - C **(Question No. 10 is Compulsory; Attempt any one from question numbers 11A & 11B)**		
10.	i) Write the product with mechanism  ii) Write various method for generation of Benzyne intermediate. Also discuss its structure and few important reactions.	**10+10**	**CO1**
11A.	i) Discuss chemical correlation method which involve diastereomers. ii) Complete the reaction.  **OR**	**10+10**	**CO3**
11B.	i) Discuss the structure and stereochemistry of cis-decalol. ii) Complete the reaction with mechanism.  	**10+10**	**CO3**