Name: **Enrolment No:**	UPES UNIVERSITY WITH A PURPOSE

UNIVERSITY OF PETROLEUM AND ENERGY STUDIES
End Semester Examination, June 2021

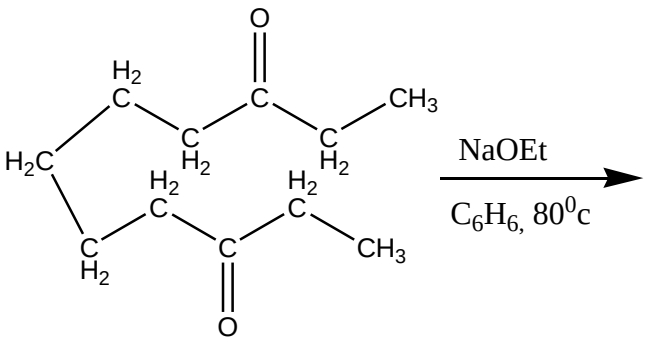
Course: M.Sc Chemistry **Semester: II**
Program: Stereochemical approach to Oragnic reaction and Mechanism **Time: 03 hrs.**
Course Code: CHEM 7024 **Max. Marks: 100**

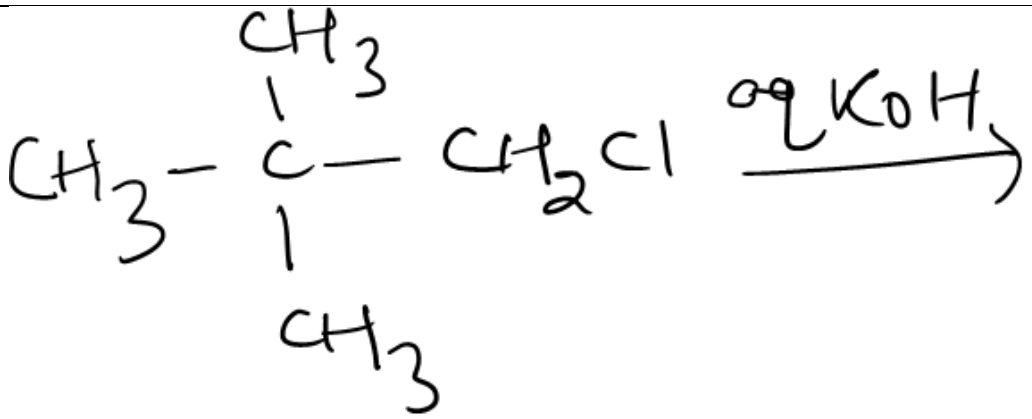
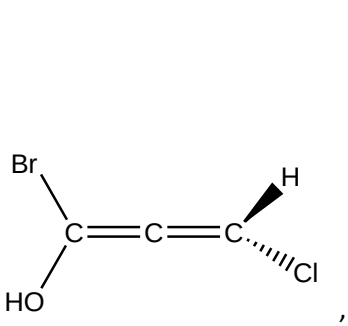
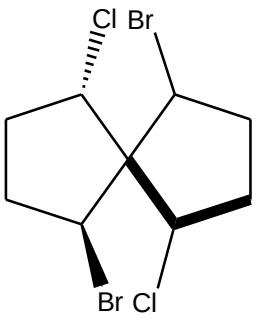
Instructions: Read the instructions given below carefully:
All questions are compulsory.

SECTION A

Instructions:

1. Each Question will carry 5 Marks
2. Answer should be short
3. You have to very careful to write the answer.

S. No.			Marks	CO
Q 1		Elucidate the product with mechanism 	5	CO1
Q 2		Explain the product with mechanism	5	CO2

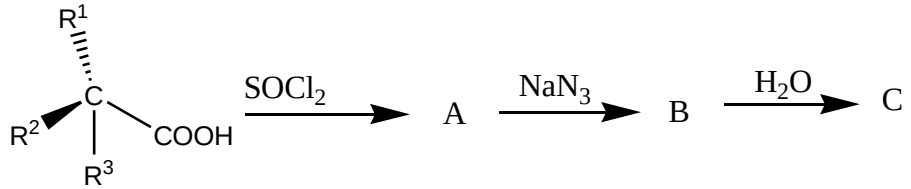
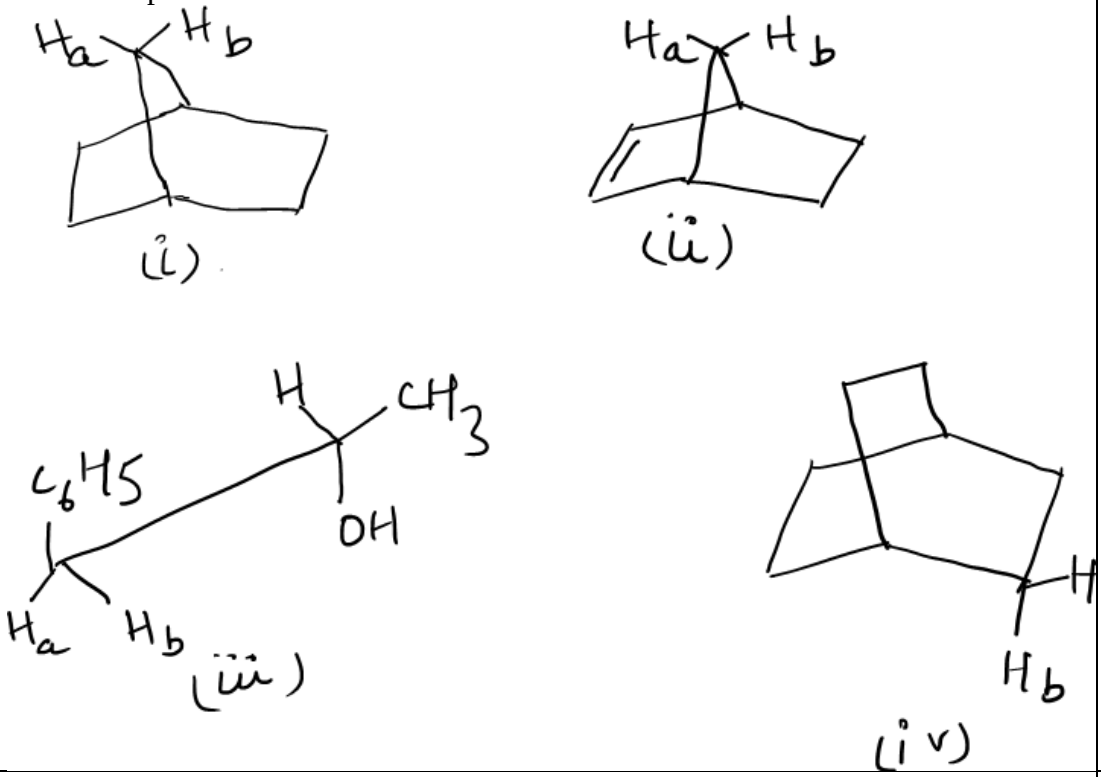
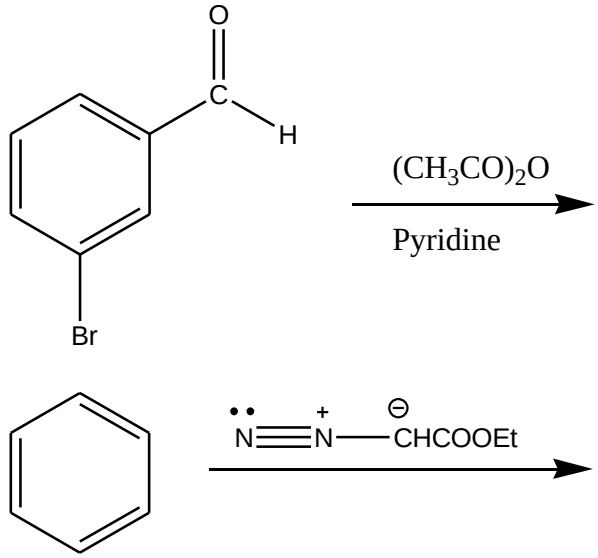
				
Q 3		Write R and S configuration of the following compounds  , 	**5**	**CO3**
Q 4		Write the most stable conformation of trans-1,4-dimethylcyclohehane along with newman projection	**5**	**CO3**
Q 5		Why acetolysis of anti-7-norbornenyl tosylate is faster than syn - isomer	**5**	**CO2**
Q 6		Discuss CIP rule	**5**	**CO3**

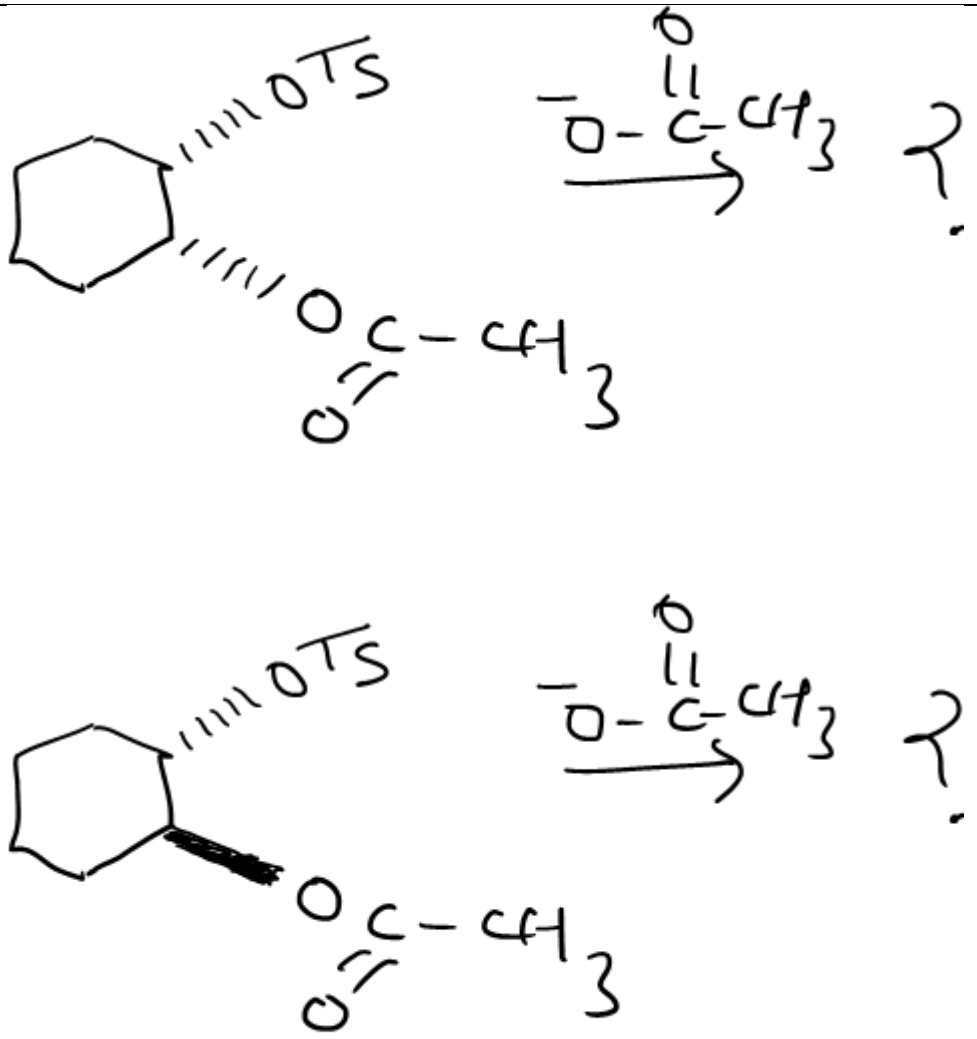
SECTION B

Instructions:

1. Each question will carry 10 marks
2. Write short/brief notes of 1-2 page answer.
3. Draw the neat diagram, to justify your answer as well as to score higher marks.

Q 1		Explain the following reaction with mechanism	**10**	**CO2**

			
Q 2	Indicate if the hydrogens marked H^a and H^b are homotopic, enantiotopic or diastereotopic 	**10**	**CO4**
Q 3	Discuss the products with mechanism 	**10**	**CO2**
Q 4	Predict the products with proper reasoning and mechanism	**10**	**CO1**

			
Q 5	Discuss the structure, stability and stereochemistry of cis-Decalone and Trans-decalone	**10**	**CO3**

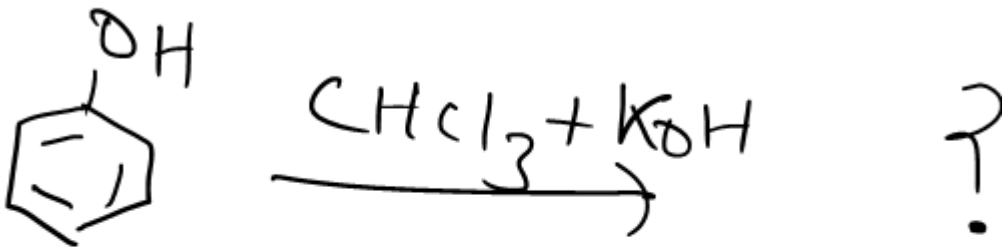
SECTION C

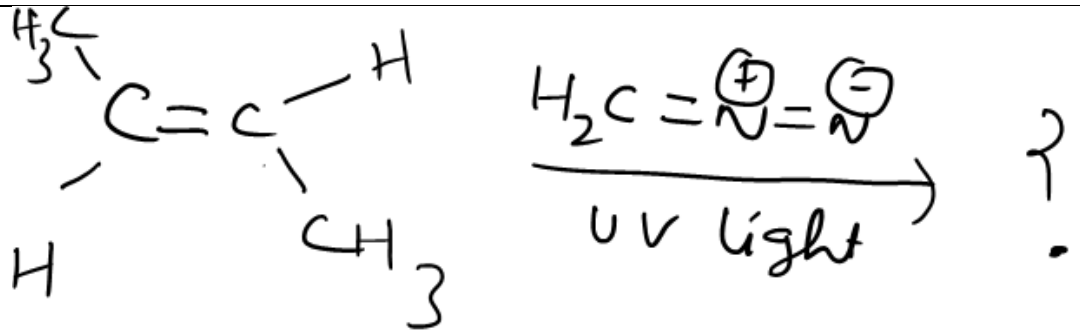
Instructions:

1. Question is of 20 marks

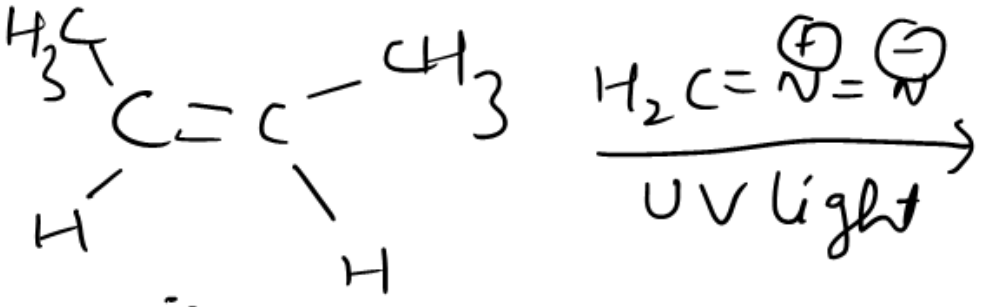
2. Internal choices is there attempt any one of them.

Q 1	i) Explain the reaction with mechanism	**20**	**CO1**

	 ii) Write various method for generation of Nitrene intermediate. Also discuss its structure and few important reactions OR i) Explain the reaction with mechanism		



(i)



(ii)

ii) Write various method for generation of Carbene intermediate. Also discuss its structure and few important reactions