


**NAVRACHANA  
UNIVERSITY**
*a UGC recognized University*

**School:** School of Science  
**Program/s:** M.Sc.-Chemistry  
**Year:** 2<sup>nd</sup> **Semester:** 3<sup>rd</sup>  
**Examination:** End Semester Examination  
**Examination year:** December - 2021

**Course Code:** CH249 **Course Name:** Reagents in Organic Synthesis  
**Date:** 02/12/2021  
**Time:** 08:30 am to 10:30 am

**Total Marks:** 40  
**Total Pages:** 2

**Instructions:**

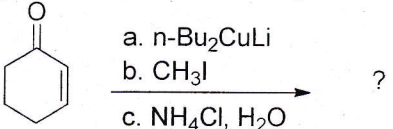
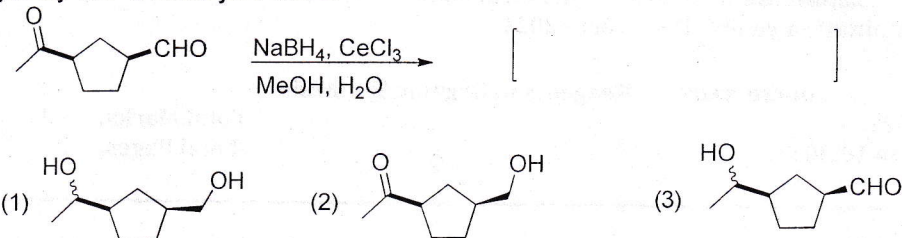
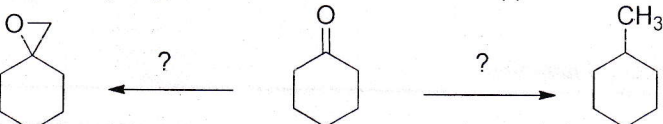
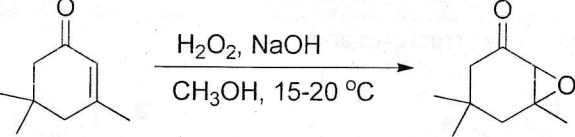
Write each answer on a new page.

Write in points and in brief.

Please draw structures neatly

\* COs=Course Outcome mapping. # BTL=Bloom's Taxonomy Level mapping

Q. No.	Details	Marks	COs*	BTL#
Q.1	Explain the Regio and stereochemical outcome by showing structures and intermediates 	8	CO1 CO4	BT1, BT2 BT3 BT4
Q.2	Find out what is [A] and [B]. What factor(s) stabilize C 	4	CO1 CO2 CO3	BT1, BT3, BT4 BT5
Q.3	Explain the formation of preferential anti-diol and also rationalize the choice of reagents 	5	CO1 CO3 CO4	BT1, BT2 BT3 BT4 BT5
Q.4	Predict the products for 4a, 4b and 4c (a)  ? (b)  ? (c)  ?	6	CO3, CO2 CO4	BT1, BT2, BT3

Q.5	Draw the structure of the major product (along with stereochemistry and justification of the same) 	5	CO4	BT1, BT2 BT3 BT4
Q.6	Predict the major product formed in the following reduction reaction. Also, justify the choice you make 	4	CO1 CO3	BT1, BT2 BT3 BT4
Q.7	Fill in the reagent(s) required to synthesize methyl cyclohexane and the epoxide (May involve more than one step) 	5	CO1 CO2	BT1, BT2 BT3 BT4
Q.8	Write a mechanism for the following transformation 	3	CO1 CO2 CO3	BT1, BT2 BT3 BT4

\*\*\*\*\*End of Question Paper\*\*\*\*\*