DEPARTMENT OF PHARMACEUTICAL SCIENCES & TECHNOLOGY

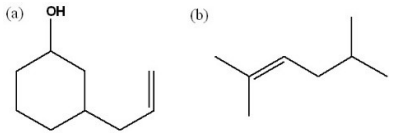
BIRLA INSTITUTE OF TECHNOLOGY, MESRA, RANCHI
(Internal Assessment I)

CLASS: B. PHARM **SEMESTER:** II
BRANCH: PHARMACY **SESSION:** SP 2025
SUBJECT: BP202T PHARMACEUTICAL ORGANIC CHEMISTRY I-THEORY
TIME: 2.00 Hour **FULL MARK:** 30

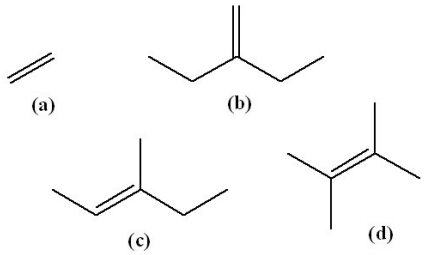
PART I

A. Objective type questions (Answer all questions) **(5 x 02 = 10 marks)**

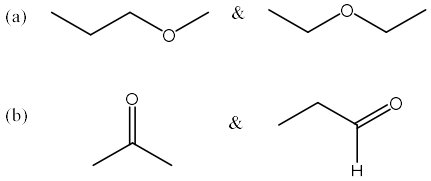
1. **Draw the bond-line structures of the following:**
   a) **7-chloro bicyclo[2.2.1] heptane** b) **2,3,5-trimethyl-4-propyl heptane**
2. **State the IUPAC name of the following structures:**



3. **Among pentane and nonane, which one has a higher boiling point and why?**
4. **Arrange the following alkenes in descending order of stability and state the probable reason for these.**



5. **Recall which class of structural isomers the following compounds are:**

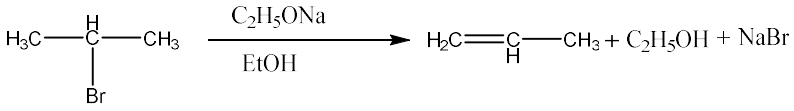


PART II

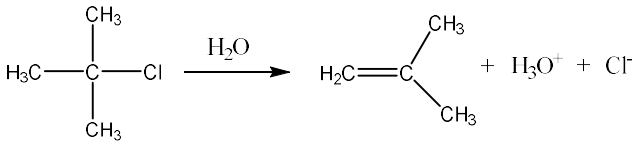
B. Long answers type questions (01x10=10 marks)

6. (A) Identify the following reactions. Write the mechanism of the following reactions in detail. [5+5]

i)



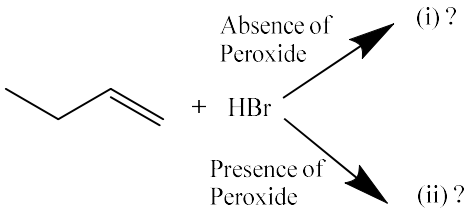
ii)



Or

(B) (i) Write down the mechanism of halogenation of the alkane reaction. Discuss the orientation and selectivity of the same reaction. [6]

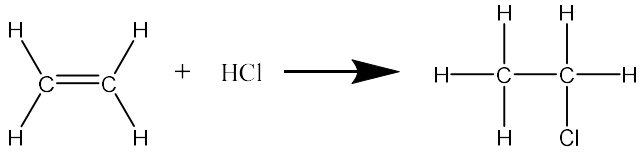
(ii) Write the major product of the reactions. If such product formation follows certain rules, mention the name and state the rules. [4]



PART III

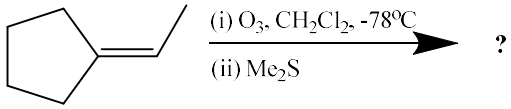
C. Short answers type questions (02x05=10 marks)

7. (A) Discuss the mechanism of the following reaction. [5]



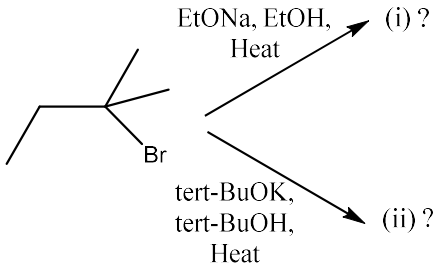
Or

(B) (i) Write the structure of the end product(s) for the following reactions. [2]



(ii) Classify organic compounds with examples. [3]

8. Write down the major product formed in the following reaction. If such product formation follows certain rules, mention the name and state the rules. [5]



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