

NAME:		ROLL NO:		TIME:	50: MIN
SUB:	Chemistry	Date:		CLASS:	1 st Year
SYLLABUS	Chp. 11 (Hydrocarbons)	T. MARKS	30	OBT. M	

Q. 1 Choose the Correct Answer. Cutting, Erasing, Double Selection is Strictly Prohibited. (1x6=6)

- What intermediate is formed during the electrophilic addition of HBr to an alkenes?**
 (A) Carbocation (B) Carbanion
 (C) Radical (D) Epoxide
- Markownikov's rule is application to:**
 (A) $\text{CH}_2 = \text{CH}_2$ (B) $\text{CH}_3 - \text{CH}_2 - \text{CH}_3$
 (C) $\text{CH}_3 - \text{CH} = \text{CH} - \text{CH}_3$ (D) $(\text{CH}_3)_2\text{C} = \text{CH}_2$
- Which of the following reagents is typically used for the acid-catalyzed hydration of alkenes to form alcohols?**
 (A) H_2 / Ni (B) O_3 followed by $\text{Zn}/\text{H}_2\text{O}$
 (C) Dilute H_2SO_4 (D) Br_2 in CCl_4
- Alkanes are generally unreactive toward polar reagents because:**
 (A) They have double bonds (B) They are atomic
 (C) Their bonds are non-polar (D) They are ionic
- Alkane undergoes ozonolysis followed by reduction with zinc dust and water to yield propanone and methanal. The alkene is:**
 (A) 1- Butene (B) 2- Butene
 (C) 2- Methylpropene (D) 2- Methyl-2-butene
- What type of isomerism exists in but-2-ene?**
 (A) Chain (B) Geometrical
 (C) Functional (D) Position

PART-I

Q. 2 Write Short Answers of the Following Questions (2x8=16)

- Differentiate between aliphatic and aromatic hydrocarbons with one example each.
- Write the IUPAC name of the following: a) $\text{CH}_2 = \text{CH} - \text{CH} = \text{CH}_2$ b) $\text{CH} \equiv \text{C} - \text{CH} = \text{CH} - \text{C} \equiv \text{CH}$
- Why do branched alkanes have lower boiling points than the straight-chain alkanes?
- What is hemolytic and heterolytic bond fission?
- Why the order of stability of carbocation is $3^\circ > 2^\circ > 1^\circ$?
- Write down the structure formulas for 2- methyl butane and 2,2-dimethylpropane.
- Give the dehydrohalogenation reaction of bromopropane?
- Given the molecular formula C_5H_{10} , list all possible structural isomers that are alkenes.

PART-II

Write Answers of the Following Questions in Detail.

Q. 3 (a) Explain the following reactions of alkenes with examples:

- | | | | |
|---|---------------|-------------------|---|
| a) Halogenation | b) Ozonolysis | c) Polymerization | 4 |
| (b) Describe the free radical halogenations of methane using Cl_2 as an example. | | | 4 |



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1ST YEAR REVISION & TEST SESSION



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Answer Key

1	A	2	D	3	C	4	C
5	C	6	B				