Stereo Chemistry date: 01 /03/2023

Time: 1h

Q1) Complete these sentences: 6 marks

- 1- A right-hand glove is different than a left-hand glove, the property is commonly called ---
- 2- Two compounds that are nonsuperimposable mirror images of each other are called ------
- 3- Alkanes that contain three or fewer Carbon atoms have ----- constitutional isomers. Constitutional isomers are also called -----
- 4- The two compounds shown below are -----

- 5- In general, a molecule with no stereogenic centers will not be -----.
- 6- A plane of symmetry is a mirror plane that cuts the molecule in two halves, so that one half of the molecule is----- of the other half.

Q2) Draw and name the more stable conformer of Butane. 5 marks

Q3) Which of the following compounds exhibit geometric isomerism? Explain and show the isomers. 5 marks

(A)
$$CH_2 - CH = CH_3$$

(B) $CH_3 - CH = CH - CH_3$

Q4) Show the chiral carbon in the following molecules: 4 marks