
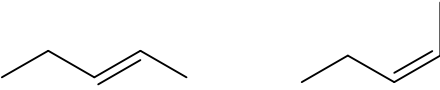
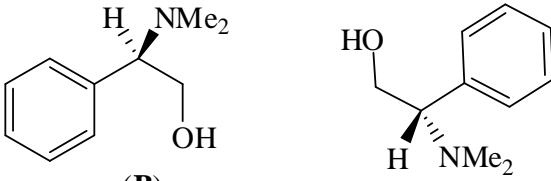
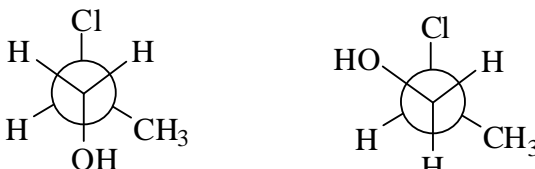
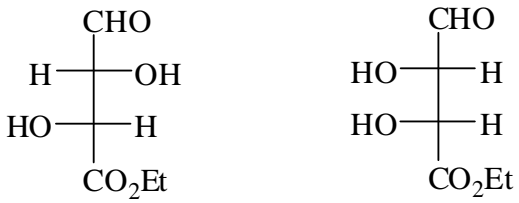


Marks
8

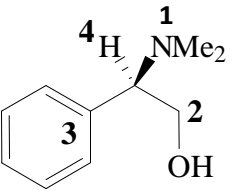
- Consider the following pairs of compounds. Indicate the isomeric relationship that exists between the compounds in each set.

| | |
|--|--|
|  | <p>constitutional isomers (different connectivity)</p> |
|  (A) | <p>diastereoisomers (same connectivity but different 3D arrangement)</p> |
|  (B) | <p>enantiomers (non-superimposable mirror images)</p> |
|  | <p>conformational isomers (can be interconverted by rotation of the central C-C bond)</p> |
|  (C) | <p>diastereoisomers (same connectivity but different 3D arrangement. Not enantiomers)</p> |

Give the full name of compound (A) that unambiguously describes its stereochemistry.

(E)-2-pentene. (The alkyl groups are on opposite sides of the C=C hence (E)).

What is the configuration of the stereogenic centre in compound (B)?


(B)

The priorities are indicated on the figure. With the lowest priority at the back, the sequence 1-2-3 is in a clockwise direction: **(R)**.

Is compound (C) a *meso* isomer? Give a reason for your answer.

No. C does not have a plane of symmetry so is optically active.