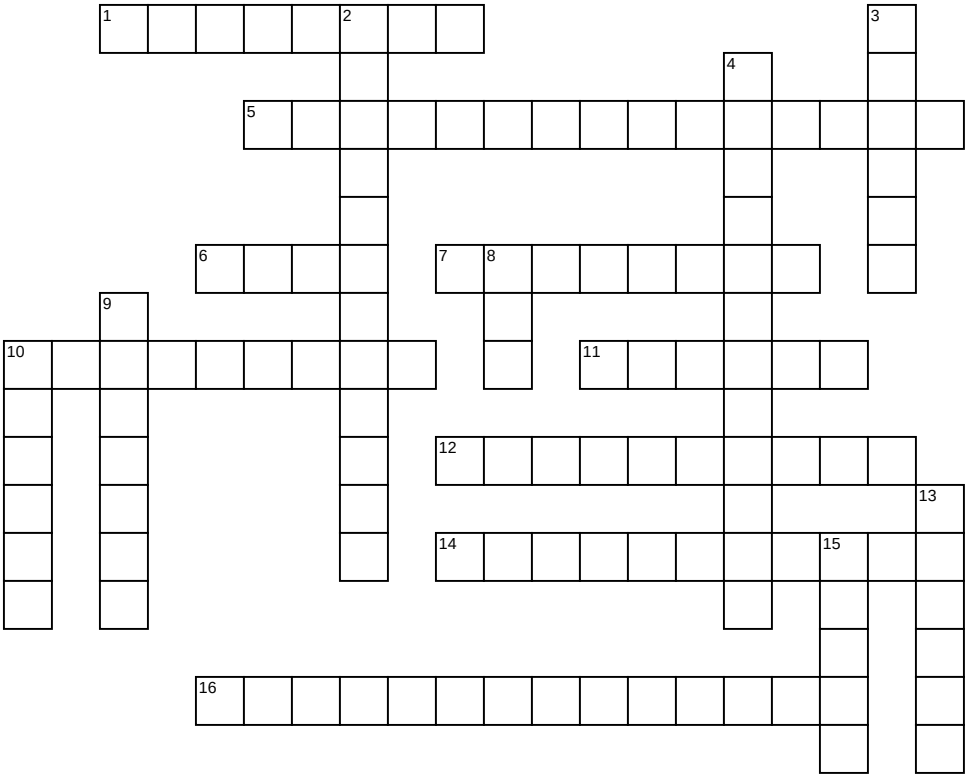

ACROSS

1 A _____ conformation is a chemical conformation that exists in any open chain single chemical bond connecting two sp3 hybridised atoms as a conformational energy maximum.
5 _____ involves the study of the relative spatial arrangement of atoms within molecules.
6 A _____ compound is a chemical compound with molecules that contain 2 or more stereocenters but which is optically achiral because it contains an internal plane of symmetry.
7 Optical rotation or optical _____ is the rotation of linearly polarized light as it travels through certain materials.
10 A _____ conformation is a chemical conformation that exists in any open chain single chemical bond connecting two sp3 hybridised atoms as a conformational energy minimum.
11 The term _____ is used to describe an object that is non-superimposable on its mirror image.
12 _____s are stereoisomers that are nonsuperimposable complete mirror images of each other.
14 _____ is a cycloalkane containing 6 carbons and 12 hydrogens, which has the lowest angle and torsional strain of all the cycloalkanes.
16 _____ isomerism is a form of stereoisomerism involving molecules with the same structural formula existing as different conformers due to atoms rotating about a bond.

DOWN

2 A _____ is any atom in a molecule bearing groups such that an interchanging of any two groups leads to a stereoisomer.
3 Van der Waals _____ results from van der Waals repulsion when two substituents in a molecule approach each other with a distance less than the sum of their van der Waals radii.
4 _____s are stereoisomers that are not enantiomers.
8 _____-trans isomerism is a form of stereoisomerism describing the orientation of functional groups typically around double bonds which cannot rotate.
9 A _____ mixture is one that has equal amounts of left- and right-handed enantiomers of a chiral molecule.
10 _____ effects arise from the fact that if atoms are brought too close together, there is an associated cost in energy due to overlapping electron clouds.
13 A _____ projection visualizes chemical conformations of a carbon-carbon chemical bond from front to back, with the front carbon represented by a dot and the back carbon as a circle.
15 The presence of _____ strain in a molecule indicates that in a specific chemical conformation bond angles are deviating from the ideal bond angles required to achieve maximum bond strength.