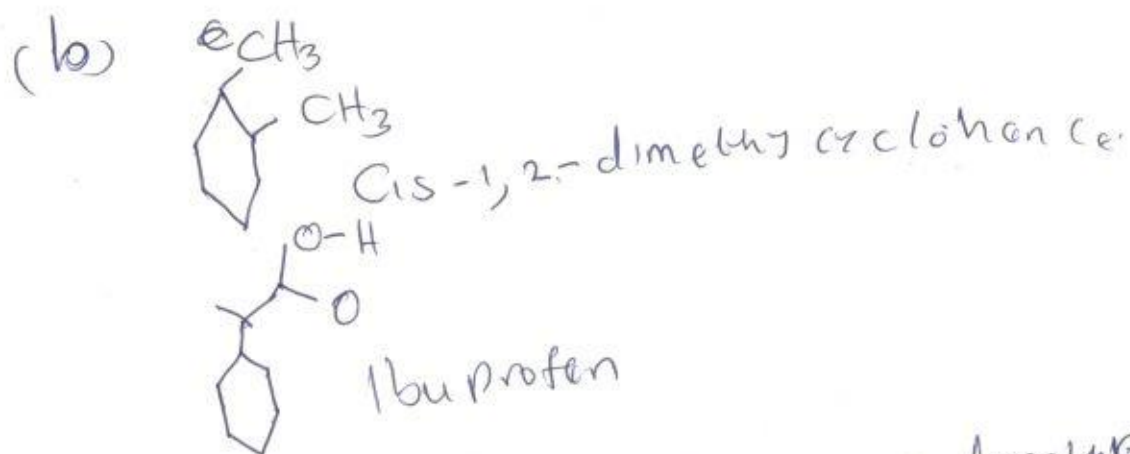


(1) One

(a) Biofuels produce less carbon out put as compare with conventional petroleum product.  
Biofuels gives out less soot when burn as compare with conventional petroleum product.  
Biofuels give out few pollutant hence producing less air pollutant compare to conventional petroleum product.



The chirality of cis-1,2-dimethylcyclohexane has only one chirality. It is not superimposable on its mirror image.

(c) The intermolecular force stronger the intermolecular forces between them ~~molecules~~ when the size ~~molecules~~ is high the melting point size of the molecules. molecules with ~~big~~ large molecules have higher melting and ~~boiling~~ boiling point

Shape of the molecules - regular shape molecules have high melting point and boiling point  
Ionic Bonds - the stronger the ionic bond the higher the melting point.

(e) Used to control and enhance conductivity in polymers and are added to anti static shielding on airplane wings and fused lags because of their high strength, low weight and flexibility.

Carbon allotropic dense superior mechanical strength because it has a covalent bond  $sp^2$  bond between the carbon atoms and high electrical conductivity due to zero overlap semiconducting with electron and holes as charge carriers hence having delocalized electron.

(f.)

(9)

This process of hybridization is  $sp^2$  hybridization, and compound is ethylene which uses two of its  $sp^2$  hybrid orbitals to form  $\sigma$  bond to two hydrogen atoms. The remaining  $sp^2$  orbitals of one carbon each overlap along the internuclear axis to get a  $\sigma$  bond connecting the two carbons. The overlap is aside by a side manner to give a  $\pi$  bond.