

Chem 116

Prof. Sevian

Solutions to Ch. 11: 2, 5 and 6

Answers to these questions are provided here because they are not in the Student Solutions Manual.

2. a) hydrogen bonding and dispersion forces, b) dispersion forces, c) ion-dipole attractions and dispersion forces, d) dipole-dipole attractions and dispersion forces.

5. Propanol has hydrogen bonding and dispersion forces while ethyl methyl ether has dipole-dipole attractions and dispersion forces. While the dispersion forces in ethyl methyl ether are probably greater than in propanol, the hydrogen bonding in propanol is much stronger than the dipole-dipole attractions in ethyl methyl ether. It requires a higher temperature to break attractive forces in propanol since they are stronger, so propanol boils at a higher temperature.

6. a) n.b.p.~360K, n.f.p.~270K, b) gas, solid, liquid.