**QUESTIONS**

1. Finding a synthetic polymer sample in which all the polymer chains have the same molecular weight is infrequent. Alternatively, a range of molecular weights follows a bell-curve. distribution. Some chains will be much larger. or smaller than others, with most. chains clustering around a central point on. the curve. This highest point on the curve exhibits the most popular. molecular weight in the sample. Calculates the average molecular weight and weight fraction (Wi) of each .molecule type in the sample. The weight fraction is represented by dividing the weight of a particular kind of molecule by the total weight of the sample. This can be expressed mathematically. as NiMi/.NiMi. It is using NiMi and NiMi to obtain. the average molecular weight, performing .this division using the weight fraction. The weight averages. molecular weight is then calculated by summing the. product of each weight fraction and its molecular weight expressed. as the sum of WiMi.[1]
2. K and a are constants that depend on. the structure of the polymer, the solvent in which the polymer is present, and the temperature of the viscos metric conditions. The value of a reflects the polymer's degree. of polymerization and flexibility.
3. Hydrogen bonds in water make it. a more suitable substance for PEG. In addition, the low viscosity of water compared to other polar solvents. makes it the most suitable solvent for this experiment. Other polar solvents, such as methanol ethanol, could. also be used, but their viscosity is higher than water.