**Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Student # (last 3 digits only) XXX-XXX-\_\_\_\_\_\_\_\_\_\_**

**Biology 2290 Section X Quiz #1 (5%)**

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Molecular weights for use in the calculations

Glucose 180.16 Sodium chloride 58.44

(1) If a percent transmittance (%T) of 83.2% is recorded for a sample in the spectrophotometer, what is the absorbance (A) of the sample? (Show equation used in the calculation).

(2) The absorption coefficient (E) of a solution is 16000 litres/mole/cm and it has an absorbance of 0.320 at 600 nm. What is the concentration of the solution in moles/liter? (Show equation used).

(3) Add 2.2 x 108 ng to 3.7 x 10-2 Kg. Give your answer in g.

(4) Sodium chloride is a crystalline solid. What is the concentration of a 0.06% (w/v) solution of sodium chloride? Give your answer as an exponent.

(5) If 400 ml of 15 mM solution contains 4.5 g of solute, what is the molecular weight of the solute?