**CA2.3 Concepts Assignment Segment – Discrete Random Variables and Probability Distributions**

Use ONLY words (no formulas, no equations, and no symbols) to answer the following questions:

1. Define in your own words what a random variable is and what makes it discrete?

* 1. What limitations are there in using this approach to probability prediction?

* 1. What type of data do you need?

1. Define Expected Value.

For the following 3 types of distributions explain in words (no formulas, no equations, and no symbols) a) what they model and b) what the given elements are for each (i.e. event, sample, conditional/independent). c) Then provide one example from your field \*of how they could be applied (you may use sources but must have more than one, you may not quote them, and you must cite them):

1. Binomial
2. Hypergeometric
3. Negative Binomial
4. How does the Bernoulli random variable relate to the binomial and negative binomial distributions?