Statistics - ICS Part 1 Statistics Chapter 9 Short Questions Preparation

Q1. Define hypergeometric random variable.

Ans 1: The random variable X which represents the number of successes in a hypergeometric experiment is called a hypergeometric ranodm variable, it is a dscrete variable which can assume any of the values x = 0,1,2,....... n,

Q2. Write down any two properties of hypergeometric probability distribution.

Ans 1: 1.The outcomes of each trail may be classified into to categories : success or failure.
2.The successive trail are dependent.

Q3. What is Bernoulli trail?

Ans 1: A trail having two possible outcomes is called Bernoulli trail.

Q4. What are Bernoulli trials.

Ans 1: Repeated independent trials in which there are only two possible outcomes and probabilites of the outcomes remain the same for all trials are called Bernoulli trials.

Q5. What is the range of the binomial random variable.

Ans 1: The range of the binomial random variable is 0 to n.

Q6. State the properties of the hyperogemoetric experiment.

Ans 1: 1- Each trial of the hypergeometric experiment results in an outcome that can be classified into one of the two categories, success or failure.

Ans 2: 2- The successive trials are dependent.

Ans 3: 3- The probability of success changes from trial to trial.

Ans 4: 4- The experiment is repeated a fixed number of times.

Q7. Define the binomial probability distribution.

Ans 1: If P is the prbabilyt of success in a single trial and q is teh probability of failure, then the probability of exactly x successes in

a n trials of a binomial expriment.

Q8. Write down two properties of binomial experiment.

Ans 1:

1. The outcomes of each trail may be classified into two categories i.e success and failure.
2. The replaced trails are independent.

Q9. What are the resembling point in binomial and hypergeometric experiments.

Ans 1:   1.The outcomes of trail may be classified into two categories as success or failure.
2.Experiment is repeated a fixed number of times.

Q10. Define hypergeometric experiment.

Ans 1:   An experiment in which a random sample is chosen without replacement from a finite population is said to be hypergeometric experiment.