BA5106: Statistics for Management

Two Mark Questions with Answer

Unit-I

1. Statistics:
   Statistics are usually defined as
   - A collection of numerical data that measures something.
   - The Science of recording, organising, analysing and reporting.
2. What is the need for statistics?

   Statistics gives us a technique to obtain, condense, analyse and relate numerical data. Statistical methods are of a supreme value in education and psychology quantitative information.

3. What is probability?

   Probability is a way of expressing knowledge or belief that an event will occur or has occurred.

4. What is a random experiment?

   An experiment is said to be a random experiment, if it's out-come can't be predicted with certainty.

5. What is a sample space?

   The set of all possible out-comes of an experiment is called the sample space. It is denoted by 'S' and its number of elements are n(s).

   Example: In throwing a dice, the number that appears at top is anyone of 1,2,3,4,5,6. So here: S = {1,2,3,4,5,6} and n(s) = 6

   Similarly in the case of a coin, S = {Head, Tail} or {H,T} and n(s) = 2.

6. What is the definition of probability?

   If 'S' be the sample space, then probability of occurrence of an event 'E' is defined as:

   $$P(E) = \frac{n(E)}{n(S)} = \frac{\text{number of elements in 'E'}}{\text{number of elements in sample space 'S'}}$$

7. What are theoretical distributions?

   Theoretical distributions are based on mathematical formulae and logic. It is used in statistics to define statistics. When empirical and theoretical distributions correspond, you can use the theoretical one to determine probabilities of an outcome, which will lead to inferential statistics.

8. What are the various types of theoretical distributions?
   - Rectangular distribution or (Uniform Distribution)
   - Binomial Distribution
   - Normal Distribution

9. Define rectangular distribution and binomial distribution?

   Rectangular distribution: Distribution in which all possible scores have the same probability of occurrence.

   Binomial Distribution: Distribution of the frequency of events that can have only two possible outcomes.

10. What is normal distribution?

    The normal is a bell-shaped theoretical distribution that predicts the frequency of occurrence of chance events. The probability of an event or a group of events corresponds to the area of theoretical distribution associated o the event or group of events. The distribution is asymptotic; its line continually approaches but never reaches a specific limit. The curve is symmetrical; half of the total area is to the left and the other half to the right.