Statistics - ICS Part 1 Statistics Chapter 4 Short Questions Preparation

Q1. Define dispersion, mean deviation and standard deviation.

Ans 1: By dispersion, we mena the extent to which the values are spread out from the average.

Ans 2: The mean deviation is defined as the average of absolute deviations of the valeus from an average mean or median.

Ans 3: The standared deviation as the positive square root of the mean of the squared deviations of the values from their mean.

Q2. Define variance.

Ans 1: Variance of the observation is defined as mean of squares of deviation of all the observation from the mean.

Q3. Why standared deviation is preferred over mean deviation.

Ans 1: The mean diviation treates both positive and negative values as positive. It is not capable of algebraic manipulationdue to the absolute values, On the other hand, teh standard deviation has a definite mathematical meaning and is pderfetly adaptable to algebraic treatment.

Q4. Describe the four characteristics of a distribution.

Ans 1: 1- Teh central value in the distribution around which the observation tend to lie.

Ans 2: 2- The dispersion of the distribution, i,e. the extent to which the observations are spread out from the central value.

Ans 3: 3- The shape of the distribution,i.e, whathere the distribution is symmetrical or skewed.

Ans 4: 4- Teh peakedness or flatness of the distribution which is measured relative to the normal distribution.

Q5. If Var (X) = 16 than find variance of 3 x and 3x - 10

Ans 1: Var (3) = 9 Var (X) = 9 (6) = 144

Ans 2: Var (3x - 10) = 9 Var (X) = 144

Q6. If S.D=3 of set of data then what will be in the variance?

Ans 1: variance =(SD)2=(3)2=9

Q7. Define absolute dispersion.

Ans 1: The actual variation or dispersion determined by measured of dispersion is called absolute dispersion.

Q8. Give names of any four methods for calculating dispersion.

Ans 1: 1- The range

Ans 2: 2- Teh semi interquartile range or the quartile deviation

Ans 3: 3- The mean deviation or the average deviation

Ans 4: 4- The standard deviation

Q9. Define moments.

Ans 1: Moments are the arithmetic mean of the power to which the deviation. are raised.

Q10. When a distribution is symmetrical?

Ans 1: When the values equidistant from mean have equal frequencies then the distribution is called symmetrical.