

## Glossary

### **1. Arbitrary Origin**

In the calculation of the moments of a frequency distribution, it is often desirable to calculate the moments though arbitrary, origin before transforming them to moments about the arithmetic mean as the origin.

### **2. Arithmetic Mean**

Arithmetic Mean is obtained by adding values of all the items and dividing their sum by the number of items.

### **3. Assumed Mean**

The assumed mean is a method for calculating the arithmetic mean and standard deviation of a data set.

### **4. Asymmetrical Distribution**

In asymmetrical distribution the odd moments will not be equal to zero. This is so because when the curve is asymmetrical the deviation below the mean will not be exactly equal to the deviation above the mean, therefore the positive deviation and negative deviation will not balance out.

### **5. Central Tendency**

A measure of central tendency is a single value that tries to describe a set of data by identifying the central position within that set of data.

### **6. Dispersion**

The spread of variability in a set of data is known as dispersion.

### **7. Frequency Distribution**

A frequency distribution is an arrangement of the values that one or more variables take in a sample.

### **8. Grouped Data**

The data which is in the tabular form and which has class intervals (or values) and frequencies is called grouped data.

### **9. Kurtosis**

Kurtosis is derived from Greek word kurtos which means bulging. Kurtosis is any measure of the "peakedness" of the probability distribution of a real-valued random variable.

### **10. Moments**

Moment refers to a measure of force with respect to its tendency to provide rotation.

### **11. Skewness**

Skewness is a measure of the asymmetry of the probability distribution of a real-valued random variable. The skewness value can be positive or negative, or even undefined.

### **12. Standard Deviation**

Standard deviation (represented by the symbol  $\sigma$ ) shows how much variation or "dispersion" exists from the average mean or expected value.

### **13. Symmetrical Distribution**

In a symmetrical distribution all odd moments ( $\mu_1$ ,  $\mu_3$ ) will always be zero. This is so because when the curve is symmetrical the deviation below the mean will be exactly equal to the deviation above the mean, therefore the positive deviation and negative deviation will exactly balance out.

**14. Ungrouped Data**

The raw data without class intervals and frequencies is called ungrouped data.

**15. Variation**

Variation is the act or process of varying in condition, character, or degree.