

## Section – 5

### Ans. 2

A **research hypothesis** is a specific, clear, and testable proposition or predictive statement about the possible outcome of a scientific **research study** based on a particular property of a population, such as presumed differences between groups on a particular variable or relationships between variables.

Scaling is the procedure of measuring and assigning the objects to the numbers according to the specified rules. In other words, the process of locating the measured objects on the continuum, a continuous sequence of numbers to which the objects are assigned is called as scaling.

A **sampling frame** is a list of all the items in your population. It's a complete list of everyone or everything you want to study. The difference between a population and a **sampling frame** is that the population is general and the **frame** is specific.

A **pie diagram** (or a circle **chart**) is a circular statistical graphic, which is divided into slices to illustrate numerical proportion. In a **pie chart**, the arc length of each slice (and consequently its central angle and area), is proportional to the quantity it represents.

A chi-square test, also written as  $\chi^2$  test, is a statistical hypothesis test that is valid to perform when the test statistic is chi-square distributed under the null hypothesis, specifically Pearson's chi-square test and variants thereof.