

Q1. Define statistics.

Ans → Statistics in mathematics involves collecting, analyzing, interpreting, presenting, and organizing data. Key concepts include measures of central tendency (like mean, median, and mode) and measures of dispersion (like range and standard deviation).

Q2. Difference b/w primary data and secondary data.

<u>Ans → points</u>	<u>primary Data</u>	<u>secondary Data</u>
1) Meaning	Data collected by researcher himself	Data collected by other persons.
2) originality	Original or unique information	Not original or unique information.
3) Adjustment	Doesn't need adjustment, is focused	Needs adjustment to suit actual aim.
4) Sources	Surveys, observations, experiments	Internal records, Govt, published data etc.
5) Types of data	Qualitative data	Quantitative data
6) Methods	Observation, experiment, interview	Desk research method, Searching online, etc.
7) collected by	Researcher or his agents	Persons other than who collects primary data
8) precaution to use	NOT Necessary	Quite necessary

Q3. Importance of statistics.

Ans → There are huge importance of statistics. Some of them are discussed below:

i.) Statistics and modern science

In medical science the statistical tools for collection, presentation and analysis of observed facts to cause and incidence of diseases and result of application various drugs and medicine are of great importance.

ii.) Quality improvement:

Industries use statistics for quality improvement processes, ensuring products and services meet specified standards and minimizing defects or errors.

iii.) Education Assessment:

It is employed in educational research to evaluate the effectiveness of teaching methods, analyze test scores, and improve educational outcomes.

iv.) Data Analysis:

Statistics helps in analyzing and interpreting data, allowing mathematicians to draw meaningful conclusion from raw information.

v.) Research validity:

In mathematics, statistics enhances the validity of research by providing methods to control and measure variability, ensuring more reliable results.