# **Introduction of Statistics**

#### **Multiple Choice Type Questions**

- 1. Arthashashtra originated in:
  - (a) 17th century
  - (b) 18th century
  - (c) 19th century
  - (d) None of the above.

#### 2. "Economics is the study of economic welfare" who said this:

- (a) Marshall
- (b) Prof. Pigou
- (c) J. K. Mehta
- (d) Keynes.

## 3. He is known as father of statistics:

- (a) Bowley
- (b) Bodington
- (c) Gottfried Achenwall
- (d) None of these.

## 4. Statistics is:

(a) Facts

- (b) Presentation
- (c) Numerical data
- (d) None of these.
- 5. Name of the book by Kautilya:
  - (a) Economics
  - (b) Varta
  - (c) Krishna, Valmiki and Vashista
  - (d) None of these.

# **ANSWER**

1. (b) 2. (a)

3. (b) 4. (b)

5. (a)

SHORT ANSWER QUESTIONS

 What are the stages of statistical study? Answer:

The stages of a statistical study are:

- Collection of data
- Organisation of data
- Presentation of data
- Analysis of data

#### Interpretation of data

- What are the tools used, related to statistical study?
  <u>Answer:</u> The tools used, related to statistical study are:
- Census or sample technique
- Tally bar and assembling of data
- Graphs, tables, and diagrams
- Average, percentages, regression coefficient, and correlation
- Average and the degree of relation, percentage, and relation between degree variables
- What are the scopes of statistics?
  <u>Answer:</u> The scopes of statistics include:
- Nature of statistics
- Subject matter of statistics
- Limitation of statistics
- 4. Define statistics as a singular noun.

<u>Answer:</u> In the singular sense, statistics means the science of statistics or statistical methods. It refers to the techniques or methods relating to the analysis, collection, presentation, classification, and interpretation of quantitative data.

5. Define statistics as a plural noun.

<u>Answer:</u> In the plural sense, statistics is defined as the information in terms of numerical data or numbers such as employment statistics, statistics concerning public expenditure, population statistics, etc.

## LONG ANSWER QUESTION

1. What are your reasons for studying Economics?

Answer: Human wants are unlimited and resources to satisfy these wants are limited and these limited resources have alternative uses. The basic concern of economics is to allocate the scarce resources to the best possible use in order to derive maximum benefit from the scarce resources. Due to the scarcity of resources having alternative uses, an economy needs to allocate the scarce resources to the areas with maximum possible and optimum returns. The following are the reasons that make the study of economics important

(i) To Study the Consumer Behaviour The theory of consumer behaviour in Economics deals with the study of the behaviour of the consumers in different types of market situations. This theory helps us understand how a rational consumer makes his/her decisions to get the maximum possible satisfaction in the given income and given prices of the goods and services.

(ii) To Study the Production Theory The theory of production studies the production decisions of the producers in different types of market. The theory explains how a producer takes production decisions related to maximisation of output in given cost or the minimisation of cost for a given level of output. The theory highlights how a producer combines different inputs (given their prices) in order to minimise the cost of production and to maximise the profits.

(iii) To Study the Distribution of Income The study of Economics makes us aware about the distribution of national income. In other words, it tells us how the income arising from the total

production in an economy is distributed in the form of wage, rent, interest and profit to different factor owners (like labour, land, capital and entrepreneur).

(iv) To Study the Macroeconomic Problems Faced by an Economy Economics proves to be the most powerful tool to understand and analyse the root cause of basic macroeconomic problems faced by an economy like poverty, unemployment, inflation, recession etc. Economics helps us not only in understanding the interrelationship among these problems but also to take various corrective measures.

2. Statistical methods are no substitute for common sense. Comment.

Answer: It is absolutely true that statistical methods are no substitute for common sense. Statistical data should not be believed blindly as they can be misinterpreted or misused. The statistical data may involve personal bias or may be subject to manipulations for one's own selfish motive. Statistical data and methods are subject to the errors committed by an investigator while surveying and collecting data. Thus, one should use his/her common sense while working with the statistical methods.

This point can be understand with the help of an example A person who wanted to cross a river with his family but did not know how to swim. He knew the average depth of the river to be 125 cm. His height was 175 cm, that of his wife was 152 cm and his two children measured 120 cm and 90 cm respectively in height.

He calculated the average height of his family and found it to be around 134 cm. He analysed that the average depth of the river was less than the average height of his family and concluded that they all could cross the river safely on foot. This resulted in drowning of his children. This example proves that common sense must supersede statistical methods.

3. "You have unlimited wants and limited resources to satisfy them." Explain by giving two examples. <u>Answer:</u> The problem of scarcity is the most basic economic problem. Human wants are unlimited and resources to satisfy these wants are limited and these limited resources have alternative uses. 'Scarcity of resources' implies that there are unlimited wants to be fulfilled by limited resources which leads to lesser supply of resources as compared to demand for them.

The basic concern of an economy is to allocate the scarce resources to the best possible use in order to satisfy maximum wants. The limited resources have alternative uses which along with problem of scarcity makes it necessary for an economy to make a choice among various alternatives. For example, an economy endowed with a given level of resources has to make a choice between the production of capital goods and consumer goods. The choice of the economy (i.e., what to produce and in what quantities) depends on the need of the economy. While the production of consumer goods will hamper the capital formation in the country for future production, the production of capital goods sufficient goods for consumption to the present population. The same problem of scarcity can be felt at an individual level, e.g., with a given amount of money say, ? 10,000, one cannot buy a refrigerator and a washing machine simultaneously. Thus, the individual needs to make a choice between the alternatives according to his/her priority.

4. How will you choose the wants to be satisfied?

**Answer:** An individual may have unlimited wants but these wants are in an order of priority according to their intensity. The wants of highest intensity will be fulfilled first as they provide the highest satisfaction or utility to the individual and hence, the individual attaches the top most priority to these wants.

Further, the choice of want also depends on the need or priority in the given situation, availability of the goods and services which can satisfy the wants and the purchasing power to realise a particular want. Thus, depending on all these conditions, we can say that an individual having a limited budget will fulfil a particular need that would provide him/her the highest possible satisfaction in the given income and given prices of the goods and services required to satisfy the wants. satisfaction in the given income and given prices of the goods and services required to satisfy the wants.

