

## Chapter : 1

### Data – Its Source and Compilation

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**1. Choose the right answer from the four alternatives given below:**

**(i).** A number or character which represents measurement is called

- (a) Digit
- (b) Data
- (c) Number
- (d) Character

**Answer:** (b) Data

**(ii).** A single datum is a single measurement from the

- (a) Table
- (b) Frequency
- (c) Real world
- (d) Information

**Answer:** (c) Real world

**(iii).** In a tally mark grouping by four and crossing fifth is called

- (a) Four and Cross Method
- (b) Tally Marking Method
- (c) Frequency plotting Method
- (d) Inclusive Method

**Answer:** Both

- (a) Four and Cross Method
- (b) Tally Marking Method

**(iv).** An Ogive is a method in which

- (a) Simple frequency is measured
- (b) Cumulative frequency is measured
- (c) Simple frequency is plotted
- (d) Cumulative frequency is plotted

**Answer:** (d) Cumulative frequency is plotted

- (v). If both ends of a group are taken in frequency grouping, it is called
- (a) Exclusive method
  - (b) Inclusive method
  - (c) Marking method
  - (d) Statistical method

**Answer:** (b) Inclusive method

**2. Answer the following questions in about 30 words:**

- (i). Differentiate between data and information.

**Answer:** The data is defined as numbers that represent measurements from the real world. Datum is a single measurement. Thus, numerical information is called data. Information is defined as either a meaningful answer to a query or a meaningful stimulus that can cascade into further queries.

- (ii). What do you mean by data processing?

**Answer:** Data processing is the process of organising, presenting, analysing and interpreting data. Once the data are collected, these data need to be organised, presented and analysed for proper interpretation.

- (iii). What is the advantage of footnote in a table?

**Answer:** Footnote gives the necessary information about the statistics. For example, if we use abbreviation M and F for male and female respectively, it can be clarified through footnote. By giving a star mark, we also give source of data in footnote.

- (iv). What do you mean by primary sources of data?

**Answer:** Primary data refers to the data which is originally collected by the investigator for the purpose of present enquiry directly from individuals or group of individuals using direct personal investigation, indirect personal investigation, mailing interview method, telephonic interview method, etc. It is also called first hand or original data. It is much more reliable as compared to secondary data.

- (v). Enumerate five sources of secondary data.

**Answer:**

1. Published Printed Sources
  - Books
  - Journals/periodicals
  - Magazines/newspapers
2. Published Electronic Sources
  - E-journals
  - General websites
  - Weblogs
3. Unpublished personal records
4. Government records
5. Central Statistical Office (CSO) and National Sample Survey Office (NSSO)

**3. Answer the following questions in about 125 words:**

**(i).** Discuss the national and international agencies where from secondary data may be collected.

**Answer:** National and international agencies from where secondary data may be collected are given below:

1. Government Publications: The publications of the various ministries and the departments of the Government of India, State Governments and the District Bulletins are one of the most important sources of secondary information. These include the Census of India published by the Office of the Registrar General of India, reports of the National Sample Survey, Weather Reports of Indian Meteorological Department, and Statistical Abstracts published by state governments, and the periodical reports published by different Commissions.

2. Semi/Question uasi-government Publications: The publications and reports of Urban Development Authorities and Municipal Corporations of various cities and towns, Zila Parishads (District Councils), etc. fall under this category.

3. International Publications: The international publications comprise yearbooks, reports and monographs published by different agencies of the United Nations such as United Nations Educational, Scientific and Cultural Organisation (UNESCO), United Nations Development Programme (UNDP), World Health Organisation (WHO), Food and Agricultural Organisation (FAO), etc. Some of the important

publications of the United Nations that are periodically published are Demographic Year Book, Statistical Year Book and the Human Development Report.

4. Private Publications: The yearbooks, surveys, research reports and monographs published by newspapers and private organisations fall under this category.

5. Newspapers and Magazines: The daily newspapers and the weekly, fortnightly and monthly magazines serve as easily accessible source of secondary data. (fi Electronic Media: The electronic media specially internet has emerged as a major source of secondary data in recent times.

(ii). What is the importance of an index number? Taking an example examine the process of calculating an index number and show the changes.

**Answer:** Index numbers are statistical devices designed to measure the relative change in the level of variable or group of variables with respect to time, geographical location, etc. In other words, these are the numbers which express the value of a variable at any given period called 'current period' as a percentage of the value of that variable at some standard period called "base period".

Index numbers are indispensable tools of economics and business analysis. Following are the main uses of index numbers. Index numbers are used as economic barometers. Index numbers help in formulating suitable economic policies and planning. They are used in studying trends and tendencies. Businessmen need to know the trends in the market to take decisions about wage rates, prices of the product, prices of raw materials, etc. Therefore, index numbers are very useful for them. They provide information regarding foreign trade. They are useful in forecasting future economic activity. The cost of living index numbers determines whether the real wages are rising or falling or remain constant. It is used in deflating. For example, suppose rice sells at ₹9/kg at BBSR in 2005 as compare to ₹ 4.50/Kg in 1985.

Therefore the index number of price of rice in 2005 compared to 1985 is calculated as

$$\frac{\text{₹ } 9.00}{\text{₹ } 4.50} \times 100 = 200$$

This means that there is a net increase of 100% in the price of rice in 2005 as compared to 1985. [The base year's index number is always treated as 100] Suppose, during the same period 2005 the rice sells at Rs. 12.00/kg in Delhi. Therefore, the index number of price at Bhubaneswar compared to price at Delhi is

$$\frac{\text{₹ } 9.00}{\text{₹ } 12.00} \times 100 = 75$$

This means that there is a net decrease of 25% in the price of rice in 2005 as compared to 1985.

The above index numbers are called 'Price Index Numbers'.

To take another example the production of rice in 2012 in Orissa was 42,000 metric tons in comparison to 36,000 metric tons in 2001. So the Index Number of the quantity produced in 2012 compared to 2001 is

$$\frac{42000}{36000} \times 100 = 116.66$$

That means that there is a net increase of 21.61% in production of rice in 2012 as compared to 2001.

### ACTIVITY

**Question 1.** In a class of 35 students of Geography, following marks were obtained out of 10 marks in unit test – 1, 0, 2, 3, 4, 5, 6, 7, 2, 3, 4, 0, 2, 5, 8, 4, 5, 3, 6, 3, 2, 7, 6, 5, 4, 3, 7, 8, 9, 7, 9, 4, 5, 4, 3. Represent the data in the form of a group frequency distribution.

**Answer:**

Class	Tally Marks	Frequency
0-2	III	3
2-4		10
4-6		11
6-8		7
8-10	IIII	4
<b>Total</b>		<b>35</b>

**Question 2.** Collect the last test result of Geography of your class and represent the marks in the form of a group frequency distribution

**Answer:** Do yourself.