Organisation of Data

Multiple Choice Type Questions

1. Statistical series can be classified on the basis of:
A) General character of data
B) Construction of data
C) Both (A) and (B)
D) None of these

2. Which of the following is not a kind of statistical series?
A) Individaul
B) Signed
C) Discrete
D) Continuous

3. The method in which the upper limit of a class interval is same as the lower limit of the next class is called
A) Inclusive method
B) Exclusive method
C) Both (A) and (B)
D) Objective method

4. Progressive total of frequencies is called
A) Closed ended series
B) Open ended series
C) Cumulative series
D) Simple series

5. On the basis of general character of data, statistical series can be divided into _____ groups.
A) One
B) Two
C) Three
D) Four

ANSWER

1. (c) 2. (b) 3. (a) 4. (c) 5. (c)

SHORT ANSWER QUESTIONS

1. What is loss of information' in classified data?
Answer: Classification of data as a frequency distribution summarises the raw data making it concise and comprehensible but it does not show the details that are found in raw data. Once, the data are grouped into classes, an individual observation has no significance in further statistical calculations.

All values in a class interval are assumed to be equal to the middle value of the class interval instead of their actual value which causes considerable loss of information. It not only save our time but also our energy, which would otherwise be utilised in searching from entire things.

2. Do you agree that classified data is better than raw data?
   Answer: The raw data is usually large and fragmented and it is very difficult to draw any meaningful conclusion from them. Classification makes the raw data comprehensible by summarising them into groups. When facts of similar characteristics are placed in the same class, it enables one to locate them easily, analyse them, make comparison and draw inferences.

3. Explain the 'exclusive' and 'inclusive' methods used in classification of data.
   Answer: Exclusive Method In this method, the classes are formed in such a way that the upper class limit of one class becomes the lower class limit of the next class. Continuity of the data is maintained in this method. Under this method, the upper class limit is excluded but the lower class limit of a class is included in the interval.

   According to this method, an observation that is exactly equal to the upper class limit would not be included in that class but would be included in the next class. On the other hand, if it were equal to the lower class limit then it would be included in that class, e.g., if the class intervals are 0-5, 5-10, 15¬20 and so on, a value of 10 would be included in the 10-15 and not in the interval 5-10.

   Inclusive Method The inclusive method does not exclude the upper class limit in a class interval. It inlcludes the upper class in a class. Thus, both class limits are parts of the class interval, e.g., the class intervals of 0-5, 6-10, 11-15, and so on are inclusive.

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LONG ANSWER QUESTION

1. What is a variable? Distinguish between a discrete and a continuous variable.
   Answer: A measurable characteristic which takes different values at different points of time and in different circumstance is called a variable as it keeps varying. Different varibles vary differently and depending on the way they vary, they are broadly classified into two types

Discrete Variable	Continuous Variable
A discrete variable can take only whole numbers.	A continuous variable can take any numerical value.
Discrete varibles increase in finite jumps from one value to another and cannot take any intermediate value between them.	Continuous variables can take any conceivable value and can be broken into infinite gradations.
Examples-number of workers in a factory, number of residents in a colony, etc.	Examples-height, weight, distance, etc.

2. se the data in Table 3.2 that relate to monthly household expenditure (in □) on food of 50 households and
(i) Obtain the range of monthly household expenditure on food.
(ii) Divide the range into appropriate number of class intervals and obtain the frequency distribution of expenditure.
(iii) Find the number of households whose monthly expenditure on food is

- less than Rs 2,000
- more than Rs 3,000
- between Rs 1,500 and Rs 2,500

Answer:

(i) Range = Largest Value – Smallest Value
Highest Value = 5090
Lowest Value = 1007
So, Range = 5090 – 1007 = 4083

(ii)

Class Intervals	Tally Marks	Frequency
1000-1500	𝍸 𝍸 𝍸 |	20
1500-2000	𝍸 𝍸 ||||	13
2000-2500	𝍸 ||||	06
2500-3000	𝍸 ||||	05
3000-3500	||	02
3500-4000	|	01
4000-4500	||	02
4500-5000	—	00
5000-5500	|	01
Total		**50**

(iii) (a) Number of households whose monthly expenditure on food is less than Rs 2000
= 20 + 13 = 33
(b) Number of hoseholds whose monthly expenditure on food is more than Rs 3000
= 2 + 1 + 2 + 0 + 1 = 6
(c) Number of households whose expenditure on food is between Rs 1500 and Rs 2500
= 13 + 6= 19

3. Can there be any advantage in classifying things? Explain with an example from your daily life.
Answer: Classification refers to arranging or organising similar things into groups or classes. Classification of objects or things saves our valuable time and effort. Classification is done to group things in such a way that each group consists of similar items, e.g., we classify our wardrobe into different types of clothes or dresses according to the occasions on which they are to be worn. We put party wears, school uniform, casual daily wears and night wears separately. This helps us in an orderly arrangement of clothes and we can easily fetch the clothes we want at a particular time without searching through the whole wardrobe. Thus, it is evident that classification saves time and labour and helps to produce the desired results.

4. What are the sources of Data?
Answer: To understand more about the organisation and presentation of data, We fist need to known the sources of data. statistical data can be obtained from two sources.

- primary data
- secondary data

Primary data:- We further move on to the concept of primary data collection , organisation and presentation of data. The important points of primary data are :

- The enumerator may collect the by administering an inquiry or research. Such data is called primary data, as it is formulated on first-hand information.
- Primary data are unique, do not require any modification , and are costly.

Secondary data:- Next important form of data in organisation and presentation of data is secondary data.

- If the data have been examined and analyzed by another agency, they are called Secondary data. Usually, the issued data are secondary.
- They are already in the presence and therefore are not unique.
- It demands to be modified to satisfy the aim of the study at hand.
- Secondary data are low priced.

5. How do we collect Data?
Answer :- collection of data is important in organisation and presentation of data. It is done by the following ways.

Surveys

- The survey aims to describe characteristics like cost, worth , utility (in case of the product) and reputation , honesty, loyalty (in case of the nominee).]
- The objective of the survey is to gather data and is a method of gathering information from individuals.

Preparation of instrument :
The most prevalent type of tool employed in surveys is a questionnaire / interview schedule. The questionnaire is either self- directed by the interviewee or conducted by the enumerator or qualified investigator. While drawing- up the questionnaire/ interview schedule, the following points should be kept in mind:

- The questionnaire should not be lengthy.
- The array of problems should move from indefinite to distinct.

Mode of data collection : The next important topic is organisation and presentation of data is the mode of data collection. The aim of probing questions is to survey the acquisition of data. There are three ways of collecting data:

1. personal interviews
2. mailing surveys
3. telephone interviews

Personal interviews :- personal interviews form an important part in the mode of data collection in organisation and presentation of data. In this method, the researcher has the main role as he/she conducts the interviews face to face with the respondents. personal interviews are preferred due to various reasons

- Highest Response Rate
- Allows use of all types of questions
- Better for using open-ended questions
- Allows clarification of ambiguous questions.

The personal interview has some demerits too:

- Most expensive
- possibility of influencing respondents
- more time taking