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Assignment statistics

(a)

**Question No: 1**

1. Latin with literal meaning = data
2. Quantitative data
3. measurement of non-numeric concepts (Qualitative)
4. Classification
5. Quantitative
6. Nominal
7. Nominal scale
8. true
9. false
10. false

**Question No: 2**

**Part (a)**

Statistics Definition: Statistics is the science of collecting, organizing, presenting, analyzing, and interpreting data to help in making more effective decisions

**Examples:**

1. A sample of 200 students is selected from among 1000 students to get an idea of average height in overall school. The average height of sample would be an example of statistics.
2. A sample of 10 individuals from every major town in Rawalpindi is taken to find out the rate of anxiety and depression in region.
3. A sample of youngsters from a university of which attributes they mostly like in a car? (can be used by auto mobile manufacturers).

**Part (b)**

Countable data also known as discrete data is a data that exists in such a form that it has obvious spaces between it and can be counted (exists in whole numbers). Some of its examples are:

1. No. of cars bought from a showroom in a year
2. No. of tickets sold for a movie
3. No. of points scored in a basketball game

**Question No: 3**

**Part (a)**

**Definition:**

CLASSIFICATION of data is defined as: “The process of arranging data into homogeneous (similar) groups according to their common characteristics”.

**Its Need?**

The classification of data has its need due to following reasons:

1. By classifying data, the similar and distinctive features among different sets of data can easily be observed.
2. To facilitate the comparison between different sets of data
3. Features that make one group different from other can be considered
4. Once the data is classified it is much easier to make use of it through the process of statistics.

**Methods:**

Chronological Classification:

* Also known as ‘Temporal Classification’
* Is when data is classified based on time that is years, months, days etc.
* Can be in ascending or descending order.

Quantitative Classification:

* As the name depicts, classification of data based on having ‘measurable characteristics’
* Examples: height, income, weight

Qualitative Classification:

* As the name suggests, data in the group is one that have some qualities or features attached.
* Examples: literacy, intelligence, anxiety, depression

Geographical Classification:

* Also known as ‘Spatial Classification’ is the type of classification done on basis of geographical indication/ location i.e. provinces, cities, towns, countries etc.

**Part (b)**

**Frequency Distribution**

|  |  |  |  |
| --- | --- | --- | --- |
| **General** | **Classes** | **Frequency** | **Cumulative R. Frequency** |
| **n = 50** | **2 - 15** | **5** | **5** |
| **No. of classes = √50 = 7.07 ≈ 7** | **16 - 29** | **7** | **12** |
| **Range = 100 – 2 = 98** | **30 - 43** | **8** | **20** |
| **Class width = 98/7 = 14** | **44 - 57** | **3** | **23** |
|  | **58 - 71** | **4** | **27** |
|  | **72 - 85** | **11** | **38** |
|  | **86 - 100** | **12** | **50** |
|  |  | **50** |  |

**Part (c)**

**Ogive Curve**

**Histogram**