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**CLASS ID:** 12963

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**SUBJECT:** BASIC STATISTICS

**MODULE:** 8TH SEMISTER

# **Basic statistics**

1. Statistics is the word of APPLIED MATHEMATICS.
2. Numbers deals with QUANTITATIVE DATA.
3. Ordinal study deals with CATEGORICAL DATA.
4. ORDINAL DATA PROCESS is the process which categorize data in different groups.
5. Histogram which construct on behalf of NOMINAL AND ORDINAL data is called.
6. The grading score of ILETS belongs with BANDS measurement scale
7. Peshawar temperature recorded at 32⁰ F is the example of TEMPERATURE scale
8. Statistics has unlimited number of usages in advance research studies. (T/F) TRUE
9. Number of dots in a line is the relevant example of countable data. (T/F) FALSE
10. Non scale data do not belong with the field of Statistics. (T/F) FALSE
11. **Describe the word STATISTICS with suitable examples**

**ANS. Statistics:**

 are defined as numerical data, and is the field of math that deals with the collection, tabulation and interpretation of numerical data. An **example** of **statistics** is a report of numbers saying how many followers of each religion there are in a particular country

1. **Explain the relevant examples of COUNTABLE DATA.**

**ANS**. Countable data:

 is a data type expressed in numbers, rather than natural language description? Sometimes called quantitative data, numerical data is always collected in number form. Numerical data differentiates itself with other number form data types with its ability to carry out arithmetic operations with these numbers.

For example, numerical data of the number of male students and female students in a class may be taken, then added together to get the total number of students in the class. This characteristic is one of the major ways of identifying numerical data

1. **Elaborate the word CLASSIFICATION precisely.**

**ANS.**

 In [machine learning](https://en.wikipedia.org/wiki/Machine_learning) and [statistics](https://en.wikipedia.org/wiki/Statistics), **classification** is the problem of identifying to which of a set of [categories](https://en.wikipedia.org/wiki/Categorical_data), a new [observation](https://en.wikipedia.org/wiki/Observation) belongs, on the basis of a [training set](https://en.wikipedia.org/wiki/Training_set) of data containing observations whose category membership is known. **Examples**:

 Assigning a given email to the ["spam" or "non-spam"](https://en.wikipedia.org/wiki/Spam_filtering) class, and assigning a diagnosis to a given patient based on observed characteristics of the patient sex, blood pressure, presence or absence of certain symptoms etc.

Classification is an example of [pattern recognition](https://en.wikipedia.org/wiki/Pattern_recognition)

1. **Construct an appropriate frequency distribution for the following data related to an experimental yield.**

**93, 89,75, 97,75,47, 73, 40, 100, 42, 39, 75, 13, 39, 89, 78, 32, 72, 51, 21, 92, 45, 29, 58, 16, 31, 6, 82, 76, 10, 10, 32, 2, 25, 98, 94, 93, 91, 68, 20, 19, 61, 37, 98, 72, 61, 72, 19, 81, 78.**

**ANS.**

**RANGE:** Range= largest value – smallest value

 **R =** 100-2

 **R =** 98

Group size: Range **÷** 10 **= 9.8**

Round off **10**

 **Ascending order**:

2, 6, 10, 10, 13, 16, 19, 19, 20, 21, 25, 29, 31, 32, 37, 39, 39, 40, 42, 45, 47, 51, 58, 61, 61, 68, 72, 72, 72, 73, 75, 75, 75, 76, 78, 78, 81, 82, 89, 89, 91, 92, 93, 93, 94, 97, 98, 98, 100.

**Table:**

|  |  |  |
| --- | --- | --- |
| **Class Interval** | **Tally** | **Frequency** |
| 2-12 | IIII | 4 |
| 13-22 | IIIIII | 6 |
| 23-32 | IIIII | 5 |
| 33-42 | IIIII | 5 |
| 43-52 | III | 3 |
| 53-62 | III | 3 |
| 63-72 | IIII | 4 |
| 73-82 | IIIIIIIII | 9 |
| 83-92 | IIII | 4 |
| 93-102 | IIIIIII | 7 |
|  |  | Total frequency = **50** |

1. **Construct the followings. Ogive curve & Histogram**

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