

## Q1      Descriptive statistics      Inferential stats.

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| <p>① It is <del>was</del> used to describe or present raw data.</p> <p>② It is done with the help of graphs, charts, tables etc.</p> <p>③ We analyze the data in a meaningful way</p> | <p>① It makes inferences about the population from data.</p> <p><del>It can be achieved by probability.</del></p> <p>② It is done with the help of probability.</p> <p>③ It compares and make predictions with data.</p> |
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Q2      Null hypothesis It is an assumption that suggests that there is no difference b/w variables of population.

→ In the process of hypothesis testing we collect sample data to test statistics and check whether the data from sample is strong enough to reject the null hypothesis. The decision to reject or accept null hypothesis is based on P-value and significance value.

Q3. It measures the spread or dispersion of data.  
(a)

Q4.  $3 \times 4$  (a)

Q5.  $\begin{bmatrix} 1 & 1 \\ 1 & 1 \end{bmatrix} = I_2$  (c)

Q6. To plot the data points on a graph.

Q 11

Matrix

Tensor

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|--|--|
| ① It is a tabular format in which numbers can be represented | ① It is like a function and linear in nature   |
| ② Matrix has a 2-D grid of numbers i.e. 2-D array            | ② While tensor can have any number of dimensions i.e. it can be n-D array $n = 1, 2, 3, \dots$ |

Q 10

Orthogonal Matrix

A matrix is said to be orthogonal if  $A^T A = I$

where  $A$  is matrix

$A^T$  is transpose of Matrix  $A$   
and  $I$  is Identity matrix