# Code No: 741AD <br> JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD <br> MBA I Semester Examinations, April/May-2019 <br> BUSINESS STATISTICS 

Time: 3hours
Max.Marks:75
Note: This question paper contains two parts A and B.
Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have $\mathrm{a}, \mathrm{b}, \mathrm{c}$ as sub questions.

## PART - A

$5 \times 5$ Marks $=25$
1.a) The mean height of 25 male workers in a factory is 61 inches and the mean height of 35 female workers in the same factory is 58 inches. Find the combined mean height of 60 workers in the factory.
b) Distinguish between mean deviation and standard deviation.
c) Write about parts of a Table?
d) Explain about F-test.
e) Write the characteristics of Index Numbers.
2. Define statistics? Write the uses and limitations of statistics?

## OR

3. Compute the missing frequency from the following data?

| Income (rs) | $0-10$ | $10-20$ | $20-30$ | $30-40$ | $40-50$ | $50-60$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| No of persons | 5 | 15 | 20 | - | 20 | 10 |

4. Calculate karl pearson's co-efficient of co-relation from the following data?

| student roll no | $\mathbf{1}$ | 2 | 3 | 4 | 5 |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Marks in accounts | 48 | 35 | 17 | 23 | 47 |
| Marks in statistics | 45 | 20 | 40 | 25 | 45 |

OR
5. Compute Bowley's co-efficient of skewness for the data given below:

| Marks | $0-10$ | $10-20$ | $20-30$ | $30-40$ | $40-50$ | $50-60$ | $60-70$ | $70-80$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| No of <br> Students | 8 | 10 | 12 | 40 | 56 | 44 | 26 | 4 |

6. Define Diagram. Explain the types of Diagrams and brief on methods of data tabulation.

## OR

7. Briefly explain the properties and applications of t-Distribution?
8. Explain the procedure for testing the hypothesis?
9. From the following information construct two regression equations.
$X=68, \quad Y=150, \quad \sigma x=2.5 \quad \sigma y=20 \quad r=0.60$
10. Fit a straight line trend for the following series. Estimate the value for 2012: [10]

| Year | 2001 | 2002 | 2003 | 2004 | 2005 | 2006 | 2007 |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Production of <br> steel ( tonnes) | 60 | 72 | 75 | 65 | 80 | 85 | 95 |

OR
11. Construct index numbers of price from the following data by applying laspeyres and paasche methods.

| Commodity | 2006 |  | 2007 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Price | Quantity | Price | Quantity |
| A | 2 | 8 | 4 | 6 |
| B | 5 | 10 | 6 | 5 |
| C | 4 | 14 | 5 | 10 |
| D | 2 | 19 | 2 | 13 |

