Sub. : Business Statistics (BBA15-214)
Date : 29/12/2022
Total Marks : 60
Time: 10.00am to 12.30pm
Instructions: 1) All questions are compulsory.
2) Figures to the right indicate full marks.
Q. 1. Choose the most appropriate option.

1. $7,8,7,7,2,5$ Median $=$ $\qquad$ .
a) 7
b) 8
c) 2
d) 5
2. A graph of cumulative frequency distribution is called $\qquad$ .
a) Histogram
b) Pie chart
c) Ogive curve
d) Bar chart
3. $3,4,5,5,5,5$ Mode of given data is $\qquad$ .
a) 3
b) 4
c) 5
d) 6
4. If $600-800$ is the First Quartile class , c.f. $=66, f=78, h=200 \& N=280$ then Q1 $=$ $\qquad$
a) 610.26
b) 160.26
d) 6102.6
d) 61.026
5. On first 5 assignments of Business Statistics Pratik scores $72,86,92,63$ and 77 ,he wants to mean score $=80$,so 6th test score $=$ $\qquad$
a) 90
b) 80
c) 87
d) 85
Q. 2. State True / False
6. Statistics is mathematical science of collection .
a) True
b) False
7. 

The probability of two or more statistically independent events occurring together or in succession is equal to the sum of their marginal probabilities .
a) True
b) False
3. The correlation can never be 0 .
a) True
b) False
a) True
b) False
4. When ranks not given we can't calculate Rank correlation.
a) True
b) False

The standard error of estimate measures the variability of the observed values
5. around the regression equation.
a) True
b) False

## Q. 3. Write Short notes on (Any Three)

1. Graphical Representation of Data
2. Use of Statistics in Business
3. Types of variables
4. Spearman's Correlation coefficient
5. Regression Analysis

## Q. 4. Answer in detail (Any Two)

1. The average monthly attendance of a class is given. Draw Bar chart

| Month | July | Aug | Sep | Oct | Nov | Dec | Jan | Feb |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Attendance | 42 | 46 | 30 | 50 | 38 | 20 | 36 | 32 |

2. In a school 35 boys and 85 girls approved in a public school examination. The mean marks of boys were found to be $60 \%$,where as the mean of girls was $40 \%$. Determine average marks percentage of the school.
3. The distribution of fortnight wages of 280 employee of a company is as given below:

| Fortnight Wages in Rs. | Frequency |
| :---: | :---: |
| Less than 200 | 12 |
| $200-400$ | 16 |
| $400-600$ | 38 |
| $600-800$ | 78 |
| $800-1000$ | 80 |
| $1000-1200$ | 35 |
| $1200-1400$ | 14 |
| Above 1400 | 7 |
| Total | $\mathrm{N}=280$ |

Find first quartile, median, $\mathrm{D}_{4} \& \quad \mathrm{P}_{66}$.

## Q. 5. Case study (Any One)

1. Given the data of weight of 50 students in BBA class .Make Group Frequency distribution with 45-47, 48-50 $\qquad$ . 63 - 65.Calculate Mean Mode \& Median .

| 49 | 57 | 59 | 57 | 50 | 45 | 52 | 58 | 56 | 48 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 54 | 50 | 51 | 64 | 49 | 58 | 47 | 53 | 63 | 64 |
| 49 | 62 | 62 | 54 | 53 | 51 | 53 | 61 | 49 | 47 |
| 48 | 54 | 48 | 53 | 49 | 46 | 53 | 47 | 51 | 52 |
| 49 | 56 | 45 | 49 | 51 | 55 | 52 | 46 | 48 | 54 |

2. Calculate the rank correlation coefficient from the following data.

| $\mathbf{X}$ | 75 | $\mathbf{8 8}$ | $\mathbf{9 5}$ | 70 | $\mathbf{6 0}$ | $\mathbf{8 0}$ | $\mathbf{8 1}$ | $\mathbf{5 0}$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\mathbf{y}$ | $\mathbf{1 2 0}$ | $\mathbf{1 3 4}$ | $\mathbf{1 5 0}$ | $\mathbf{1 1 5}$ | $\mathbf{1 1 0}$ | $\mathbf{1 4 0}$ | $\mathbf{1 4 2}$ | $\mathbf{1 0 0}$ |

