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Second Semester B.Com. Degree Examination, September 2020
Paper – 2.6 : QUANTITATIVE ANALYSIS FOR BUSINESS DECISIONS – I
(CBCS) (Fresh + Repeaters) (2014-15 & Onwards)

Time : 3 Hours

Max. Marks : 70

Instruction : Answer should be either in **English** or **Kannada**.

SECTION – A

Answer **any five** sub-questions from this Section. **Each** sub-question carries **two** marks. **(5×2=10)**

1. a) Define statistics as per Prof. Horace Secrist.
- b) Find the value of median when $\bar{X} = 24.6$, Mode(z) = 26.1.
- c) What is a histogram ?
- d) If variance = 64, $\Sigma x = 250$, N = 10 find CV.
- e) Why Fisher's formula of Index number is called ideal ?
- f) What is base year ?
- g) Define tabulation.

SECTION – B

Answer **any three** of the following. **Each** question carries **six** marks. **(3×6=18)**

2. In a sample study about the traders in two towns. The following information was observed.

Town X = 60% male
 30% traders
 25% male traders

Town Y = 50% male
 35% traders
 28% male traders

Present the above data in a tabular form.

3. Find range and co-efficient of range.

| | | | | | |
|---------------|-------|-------|-------|-------|-------|
| C.I. : | 10-12 | 12-14 | 14-16 | 16-18 | 18-20 |
| F : | 3 | 4 | 9 | 16 | 2 |



4. Compute the median of the following data.

| | | | | | | | | |
|----------------------|-----|-----|----|----|----|----|----|----|
| X more than : | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| Frequencies : | 115 | 103 | 88 | 68 | 43 | 23 | 13 | 3 |

5. Compute mean deviation and co-efficient of mean deviation from the mean.

| | | | | | | | | | |
|------------|----|----|----|----|----|----|----|----|----|
| X : | 68 | 49 | 32 | 21 | 54 | 38 | 59 | 66 | 41 |
|------------|----|----|----|----|----|----|----|----|----|

6. The mean and standard deviation of two brands of bulbs are given below.

| | | |
|--------------------|----------|----------|
| Brand | X | Y |
| Mean life | 2000 hrs | 1640 hrs |
| Standard deviation | 200 hrs | 130 hrs |

Which category of bulbs has more consistency in its life ?

SECTION – C

Answer **any three** questions. **Each** question carries **fourteen** marks. **(3×14=42)**

7. Draw a histogram from the following data and locate mode graphically.

| | | | | | |
|---------------|---------|---------|---------|---------|---------|
| C.I. : | 100-104 | 105-109 | 110-114 | 115-119 | 120-124 |
| F : | 12 | 9 | 15 | 8 | 4 |

8. Calculate arithmetic mean and mode of the following data.

| | | | | | | | | |
|--------------------|----|----|----|----|----|----|----|-----|
| Wages (₹) : | 10 | 20 | 30 | 40 | 50 | 60 | 70 | 80 |
| Less than | | | | | | | | |
| F | 5 | 13 | 20 | 32 | 60 | 80 | 90 | 100 |

9. Determine the Fisher's ideal index and show how it satisfies the TRT and FRT.

| Commodities | 2018 | | 2019 | |
|--------------------|--------------|-----------------|--------------|-----------------|
| | Price | Quantity | Price | Quantity |
| A | 21 | 15 | 20 | 17 |
| B | 70 | 10 | 75 | 12 |
| C | 60 | 14 | 62 | 15 |
| D | 32 | 10 | 30 | 10 |
| E | 36 | 12 | 38 | 8 |

10. Compute Karl Pearson's co-efficient of skewness from the following data :

| | | | | | | | | | |
|--------------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|
| Marks : | 0-10 | 10-20 | 20-30 | 30-40 | 40-50 | 50-60 | 60-70 | 70-80 | 80-90 |
| No. of Students : | 4 | 10 | 21 | 32 | 15 | 13 | 5 | 7 | 3 |

11. Compute quartile deviation and its co-efficient from the following data :

| | | | | | | |
|------------|-------|-------|-------|-------|-------|-------|
| X : | 10-12 | 12-14 | 14-16 | 16-18 | 18-20 | 20-22 |
| F : | 4 | 14 | 26 | 31 | 25 | 19 |