

Roll No. :

Total No. of Questions : 7]

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E-208

B.B.A. (Part-I) Examination, 2023

STATISTICS FOR BUSINESS DECISIONS

Paper - BBA-107

Time : 3 Hours]

[Maximum Marks : 70

Section-A

(Marks : 2 × 10 = 20)

Note :- All the *ten* questions are compulsory. Each question is to be attempted in around **50** words. Each question carries **2** marks.

Section-B

(Marks : 10 × 3 = 30)

Note :- Answer any *three* questions out of five. Each question is to be attempted in around **500** words. Each question carries **10** marks.

Section-C

(Marks : 20 × 1 = 20)

Note :- *One* question based on case study is compulsory and carries **20** marks.

Section-A

1. Write short notes on the following :

- (i) Primary data
- (ii) Secondary data
- (iii) Averages
- (iv) Dispersion
- (v) Correlation
- (vi) Regression

- (vii) Aggregative index
- (viii) Average of relative index
- (ix) Conditional probability
- (x) Joint probability

Section-B

2. What are the various sources of primary data ? Explain any *two* in detail with examples.
3. Following table gives distribution of marks secured by students in an examination :

| | | | | | | | |
|------------------------|------|-------|-------|-------|-------|-------|-------|
| Marks | 0–20 | 21–30 | 31–40 | 41–50 | 51–60 | 61–70 | 71–80 |
| No. of Students | 42 | 38 | 120 | 84 | 48 | 36 | 31 |

Calculate :

- (i) Median Marks
 - (ii) Percent of failures if minimum for a pass is 36 marks.
4. Calculate both regression equations and standard error for the following data :

| | | | | | |
|----------|---|---|---|---|---|
| X | 1 | 2 | 3 | 4 | 5 |
| Y | 2 | 4 | 5 | 3 | 6 |

5. Calculate Fisher's ideal index from the following and check if it satisfies the factor reversal test.

| Articles | Base Year | | Current Year | |
|-----------------|------------------|----------------------|---------------------|----------------------|
| | Price (₹) | Quantity (kg) | Price (₹) | Quantity (kg) |
| A | 6 | 50 | 9 | 55 |
| B | 2 | 100 | 2 | 125 |
| C | 4 | 60 | 6 | 65 |
| D | 10 | 30 | 14 | 25 |

6. What is the probability that a leap year selected at random will contain :
 - (i) Either 53 Sundays or 53 Mondays
 - (ii) Either 53 Sundays or 53 Fridays ?

Section-C

7. Following table gives marks obtained by 25 students in Economics and Statistics. Calculate coefficient of correlation between marks in both subjects.

| Marks in Economics | Marks in Statistics | | | |
|---------------------------|----------------------------|-------|-------|-------|
| | 30-40 | 40-50 | 50-60 | 60-70 |
| 30-40 | 3 | 1 | 1 | – |
| 40-50 | 2 | 6 | 1 | 2 |
| 50-60 | 1 | 2 | 2 | 1 |
| 60-70 | – | 1 | 1 | 1 |