

Exam. Code : 225801

Subject Code : 5481

M.Com. 1st Semester (Batch 2023-25) (CBGS)

STATISTICAL ANALYSIS FOR BUSINESS

Paper : MC-102

Time Allowed—3 Hours]

[Maximum Marks—75

Note :— Attempt FIVE questions in all, selecting at least ONE question from each section. The fifth question may be attempted from any section. All questions carry equal marks.

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SECTION—A

1. (a) Explain the Bayes' Theorem of Probability Distribution.
- (b) A bag contains 10 white and 5 black balls. Two balls are drawn at random one after the other without replacement. Find the probability that both balls drawn are black.
2. 8 unbiased coins are tossed 256 times. Find the expected frequencies of success (getting a head) and tabulate the results obtained using binomial distribution.

SECTION—B

3. What do you mean by sampling ? Explain the different types of sampling techniques.
4. What is the difference between qualitative and quantitative research ? Explain the major sources of data collection in qualitative research.

SECTION—C

5. Explain the steps involved in designing a questionnaire. Also explain the qualities of a good questionnaire.
6. What do you understand by the term Hypothesis ? Elaborate the various types of Hypotheses in detail.

SECTION—D

7. The following figures relate to the number of units sold in five different areas by four salesmen, A, B, C and D :

Area	Number of Units			
	A	B	C	D
1	80	100	95	70
2	82	110	90	75
3	88	105	100	82
4	85	115	105	88
5	75	90	80	65

Is there any significant difference in the efficiency of these salesmen ? Table values of $F_{.05}$ for $v_1 = 3, v_2 = 16$ is 3.24.

8. The following table gives the frequency, according to the marks, obtained by 67 students in an intelligence test. Measure the degree of Correlation between Age and Marks.

Test-Marks	AGE (in years)			
	18	19	20	21
200-250	4	4	2	1
250-300	3	5	4	2
300-350	2	6	8	5
350-400	1	4	6	10