

ANURAG Engineering College

(An Autonomous Institution)

I MBA I Semester Regular/Supplementary Examinations, February-2025

RESEARCH METHODOLOGY AND STATISTICAL ANALYSIS**(MASTER OF BUSINESS ADMINISTRATION)****Time: 3 Hours****Max. Marks: 60****Section – A (Short Answer type questions)****(10 Marks)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. What do you mean by Research?	CO1	L1	1M
2. Discuss the scope of Business Research.	CO1	L2	1M
3. Define Research Problem.	CO2	L1	1M
4. Explain the concept of sampling in Research.	CO2	L2	1M
5. Define Tabulation.	CO3	L1	1M
6. Explain the use of t-distribution.	CO3	L2	1M
7. What is the meaning of Analysis of Variance (ANOVA).	CO4	L1	1M
8. Discuss the concept of correlation coefficient.	CO4	L2	1M
9. Define Time Series Analysis.	CO5	L1	1M
10. Discuss the importance of Report Writing.	CO5	L2	1M

Section B (Essay Questions)**Answer all questions, each question carries equal marks.****(5 X 10M = 50M)**

11. A) Outline the research process in Business studies. Discuss each stage in detail. CO1 L3 10M
- OR**
- B) Describe the different types of variables used in business research. How are they categorized? CO1 L3 10M
12. A) Discuss the various types of research design, focusing on experimental research design, cross-sectional studies, and longitudinal studies. Provide example of each. CO2 L3 10M
- OR**
- B) Explain the concept of sampling in research. Discuss about various sampling techniques available, and when is each technique appropriate? CO2 L3 10M
13. A) Discuss the advantages and limitations of using diagrams and graphs for data representation. CO3 L3 10M
- OR**
- B) The following table represents the frequency distribution of heights (in inches) of students: CO3 L3 10M

Height (inches)	Frequency
50 -55	8
56 - 60	15
61 - 65	20
66 - 70	12
71 – 75	5

Calculate the mean and median height of the students.

14. A) Discuss Spearman's rank correlation coefficient. How does it differ from Pearson's Coefficient, and when it used? CO4 L3 10M

OR

- B) A researcher wants to determine if there is a significant difference in the mean test scores among three different teaching methods: Method A, Method B, and Method C. The researcher randomly selects 15 students and assigns 5 students to each teaching method. After completing the teaching sessions, the researcher records the test scores of each student, as shown below: CO4 L3 10M

Method A: 60, 65, 70, 75, 80

Method B: 55, 60, 65, 70, 75

Method C: 50, 55, 60, 65, 70

Perform an analysis of Variance (ANOVA) to determine if there is a significant difference in the mean test scores among the three teaching methods. Use a significance level of $\alpha=0.05$.

15. A) Identify and explain different types of research reports commonly used in Business Management Research. CO5 L3 10M

OR

- B) The prices of 3 commodities (A, B and C) in the years 2020 and 2021, along with their quantities consumed in each year, are given in the table below: CO5 L3 10M

Commodity	Price in 2020 (in Rs.)	Quantity in 2020	Price in 2021(in Rs.)	Quantity in 2021
A	2	100	2.50	110
B	3	150	3.25	160
C	4	200	4.20	220

Using 2020 as base year, calculate the weighted price index for the year 2021.