

ANURAG Engineering College
(An Autonomous Institution)

I MBA I Semester Regular/Supplementary Examinations, February-2024
RESEARCH METHODOLOGY AND STATISTICAL ANALYSIS

Time: 3 Hours

Max. Marks: 60

Section – A (Short Answer type questions)**(10x1M=10 Marks)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. Recall the ethics in business Research.	CO1	L1	1M
2. Infer the role of business research.	CO1	L2	1M
3. Define data collection methods.	CO2	L1	1M
4. Infer the guidelines for preparation of Questionnaire.	CO2	L2	1M
5. Why is graphic representation of data desirable?	CO3	L1	1M
6. Distinguish between one dimensional and two-dimensional diagrams.	CO3	L4	1M
7. What is the difference between simple linear and multiple linear regressions?	CO4	L1	1M
8. What is ANOVA?	CO4	L1	1M
9. What is the importance of Research Report-writing?	CO5	L1	1M
10. Explain the tests of adequacy.	CO5	L2	1M

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

11. A) Describe research process in detail and explain with an example of doing market research before launching a new product. CO1 L3 10M
- OR**
- B) Differentiate among Nominal, Ordinal, Interval and Ratio Scales on any five points. CO1 L3 10M
12. A) The campus food service would like to determine how many people eat in the student cafeteria. List the survey methods in which this information could be obtained. Which method is best? CO2 L3 10M
- OR**
- B) What is experimental design in social science research? Discuss the relevance of “Control Group” in experiment? CO2 L3 10M
13. A) Ten soldiers participated in a shooting competition in the first week. After intensive training they participated in the competition in the second week. Their scores before and after training are given below:
- | | | | | | | | | | | |
|--------------|----|----|----|----|----|----|----|----|----|----|
| Score Before | 67 | 24 | 57 | 55 | 63 | 54 | 56 | 68 | 33 | 43 |
| Score After | 70 | 38 | 58 | 58 | 56 | 67 | 68 | 75 | 42 | 38 |
- Do the data indicate that the soldiers have been benefited by the training.
- OR**
- B) What are the different types of graphs and charts known to you? Explain their uses? CO3 L3 10M

14. A) Two researchers adopted different sampling techniques while investigating the same group of students to find the number of students failing in different intelligence levels. Can we say that the sampling techniques adopted by the two researchers are significantly different? Results of the investigation are shown below:

Researchers	Below Average	Average	Above Average	Genius	Total
X	86	60	44	10	200
Y	40	33	25	2	100
Total	126	93	69	12	300

OR

- B) The following table shows the scores of two students in two subjects, Math, and science:

Student	Math Score (X)	Science Score (Y)
A	75	80
B	60	65
C	85	90
D	70	75
E	90	95

Calculate the Karl Pearson's Coefficient of Correlation between the math scores and science scores of the students.

15. A) Construct Fisher's ideal index for the Following data. Test whether it satisfies time reversal test and factor reversal test.

Commodity	2009		2010	
	Price	Quantity	Price	Quantity
A	2	8	4	6
B	5	10	6	5
C	4	14	5	10
D	2	19	2	13

OR

- B) What is report formulation? Summarize guidelines for effective documentation.