

R22

Code No: 781AD

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MBA I Semester Examinations, August/September - 2023

RESEARCH METHODOLOGY AND STATISTICAL ANALYSIS

Time: 3 Hours

Max.Marks:60

Note: This question paper contains two parts A and B. i) **Part- A** for 10 marks, ii) **Part - B** for 50 marks.

- Part-A is a compulsory question which consists of ten sub-questions from all units carrying equal marks.
- Part-B consists of **ten questions** (numbered from 2 to 11) **carrying 10 marks each**. From each unit, there are two questions and the student should answer one of them. Hence, the student should answer any five questions from Part-B.

PART- A

(10 Marks)

- 1.a) What are the consequences of absence of ethics in Business Research? [1]
- b) What is Serendipity? [1]
- c) What is the meaning of Primary Research? [1]
- d) What is a Nominal Scale? [1]
- e) For which size of sample, t test is appropriate? [1]
- f) What is meant by Cusum chart? [1]
- g) How do you define Negative Correlation? [1]
- h) Name any two Non-parametric tests. [1]
- i) Define Index numbers. [1]
- j) What is the meaning of 'ibid' used in reference? [1]

PART-B

(50 Marks)

- 2.a) Explain why research is a systematic process and not an ad hoc measure based on sudden flash of ideas. [5+5]
 - b) What is the scope of Business Research? [5+5]
- OR**
- 3.a) What is the need for ensuring observational or measurement process in research not interfering with the object to be measured?
 - b) What are the basic ethical considerations for a Researcher? [5+5]
- 4.a) Distinguish between Reliability and Validity criteria in measurement. [6+4]
 - b) Why do experimental research need a Controlled environment? [6+4]

OR

- 5.a) Which are the conditions in business research needing longitudinal studies? Also explain the nature of longitudinal studies.
- b) What is Secondary Data? Explain how useful it can be in Business Research. [5+5]

- 6.a) What is Cross Tabulation of data? Provide an illustrative example.
- b) What is the importance of descriptive statistics in research? [5+5]

OR

7. An automobile tyre manufacturer claims that average life of certain grade of tyre is greater than 25,000 km when used under normal driving conditions on a car of certain weight. A random sample of 15 tyres was tested, and a mean and standard deviation of 27,000 km and 5000 km respectively, were computed. Can we conclude that the manufacturers' product is as good as claimed? [10]

- 8.a) What is Linear Discriminant line? How is it formed? What is the application of Discriminant Analysis?
- b) Define correlation and discuss its significance in Statistical Analysis. Does it signify cause and effect relationship between the two variables? [5+5]

OR

9. In an experiment conducted on a farm in a certain village of Rajasthan, the following information was collected regarding the yield in quintals per acre of 6 plots of wheat. Three out of six plots produced Sharbati wheat and the remaining three produced Australian wheat. Set up an analysis of variance table and find out if the variety differences are significant Test at 5% level of significance. [10]

10. Construct Fisher's Idea Index No. for the following data and show that it satisfies the time reversal and factor reversal tests: [10]

XXXX	Base year		Current year	
	Price	quantity	price	quantity
A	6	30	15	40
B	5	40	10	55
C	10	25	12	20
D	4	15	3	30
E	2	50	5	28

OR

11. For the following data of production of steel in million tons find a linear trend equation by the method of least squares: [10]

Year	2017	2018	2019	2020	2021
production	35	45	50	65	85

Obtain the estimated production for 2022.

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