

**R17**

Code No: E761AD

**JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD****MBA I Semester Examinations, January - 2020****RESEARCH METHODOLOGY AND STATISTICAL ANALYSIS****Time: 3 hours****Max.Marks:75****Note:** This question paper contains two parts A and B.

Part A is compulsory which carries 25 marks. Answer all questions in Part A. Part B consists of 5 Units. Answer any one full question from each unit. Each question carries 10 marks and may have a, b, c as sub questions.

**PART - A****5 × 5 Marks = 25**

- 1.a) What are the features of a good research study? [5]
- b) List and describe some sources of primary data collection. [5]
- c) Differentiate between univariate and multivariate data. [5]
- d) When is a t-test? What are its different types? [5]
- e) What are some problems that are encountered while constructing index numbers? [5]

**PART - B****5 × 10 Marks = 50**

2. What is meant by research? What are the objectives of research and its managerial value? What are the different types of research? Discuss in detail. [10]

**OR**

3. Describe the research process in detail. Take an example of doing market research before launching a new product. [10]

4. What are the features of a good research design? [10]

**OR**

5. What is a research design? Discuss the different types of common research designs. [10]

6. Define tabulation. Explain in detail the different parts of a table. [10]

**OR**

7. What is a dependent sample or repeated measures t-test? Explain its use by giving a suitable example. [10]

8. What is ANOVA? How is an ANOVA table setup? [10]

**OR**

9. Use the sample data below to test the hypotheses

$$H_0 : p_1 = p_2 = p_3$$

$$H_1 : \text{Not all population proportions are equal}$$

Where  $p_i$  is the population proportion of Yes response for population  $i$ . Using a 0.05 level of significance, what is the p-value and what is your conclusion? [10]

10. What do you understand by Exploratory Factor Analysis? Explain its use-case and utility for research by giving a suitable example. [10]

**OR**

11. Consider the following time series data.

Week	1	2	3	4	5	6
Units	18	13	16	11	17	14

Develop a three-week moving average forecasts for this time series. Compute MSE and a forecast for week 7. Use alpha 0.2 to compute exponential smoothing forecasts for the time series. [10]

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