

Code No: 781AD

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

MBA I Semester Examinations, February/March - 2024

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**. Each of these questions is from each unit and may contain sub-questions. For each question there will be an “either” “or” choice, which means that there will be two questions from each unit and the student should answer either of the two questions.

PART- A**(10 Marks)**

- 1.a) Define the term ethics in research. [1]
- b) Why is research considered a systematic process? [1]
- c) Why is sampling resorted to in survey research? [1]
- d) Give an example for nominal scale. [1]
- e) What is a quota sample? [1]
- f) Why census survey is not popular for survey research? [1]
- g) Does discriminant analysis have to be always linear? [1]
- h) What is the measure of highest negative correlation? [1]
- i) What are the components of time series analysis? [1]
- j) What is the effect of selection of inappropriate base-year for arriving at index number? [1]

PART-B**(50 Marks)**

- 2.a) With suitable examples, explain the terms pure research and applied research.
- b) What are the problems in conducting experimental research in the domain of social science and brief on types of research? [5+5]

OR

- 3.a) What are the various sources of errors in measurement ?
- b) Briefly discuss some of the important application areas of business research. [5+5]
- 4.a) Distinguish between reliability and validity of measurement. Bring out their importance.
- b) What are longitudinal studies? Under which circumstances this approach is advisable? [5+5]

OR

- 5.a) What is the importance of a questionnaire for data collection? What are the main considerations you have to keep in mind before designing a questionnaire?
 b) Brief on measurement and scaling in research design. [5+5]

- 6.a) Under which conditions the following are useful for representation of data?
 i) Pie chart ii) Histogram iii) Cusum chart.
 b) State and define any three measures of dispersion. [6+4]

OR

- 7.a) The nicotine contents in milligrams of two samples of tobacco were found to be as follows:

Sample A	20	16	26	27	23	22
Sample B	27	33	42	35	32	34

Can it be said that two samples came from normal population having the same mean?

- b) Brief on the guidelines for formulation of hypothesis. [6+4]

8. The marking of 10 trainees in two skills, programming, and analysis, are as follows:

programming	3	5	8	4	7	10	2	1	6	9
analysis	6	4	9	8	1	2	3	10	5	7

What is the coefficient of rank correlation? [10]

OR

9. A sample of 200 people with a particular disease was selected. Of these, 100 were given a drug and the others were not given any drug. The results are as follows:

Particulars	Drug administered to	Drug not administered to	Total
Cured	65	55	120
Not cured	35	45	80
total	100	100	200

Test whether the drug is effective or not at 95% confidence level. [10]

- 10.a) Explain how the research report is to be formatted and bring out its main contents.
 b) Brief on models of time series. [6+4]

OR

- 11.a) Fit a straight-line trend to the following time series data:

Year	2018	2019	2020	2021	2022
Sale of cars in thousands	80	90	92	83	94

Eliminate the trend from the series. What components are left over?

- b) Describe the types of index numbers. [6+4]

---oo0oo---