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M.TECH

Total Number of Pages :2

M.TECH 3rd SEMESTER REGULAR EXAMINATIONS, DECEMBER 2018

RESEARCH METHODOLOGY

Branch: TE, Subject Code:MTEOE3012

(Regulations 2017)

Time: 3 Hours

Max Marks : 70

Question Code: RD18002010

PART-A (10 X 2=20 Marks)

1. Answer the following questions.
 - a. Define research and research methodology.
 - b. What is the difference between Primary and secondary data?
 - c. Distinguish between t- distribution and z- distribution.
 - d. What is meant by discriminant analysis?
 - e. Write the uses of bibliography.
 - f. When do you use chi-square test?
 - g. What do you mean by open-ended and close-ended questionnaire?
 - h. Write the methods of collecting data?
 - i. What should be the characteristics of good research report?
 - j. What is regression analysis and where it is used?

PART-B (5 X 10=50 Marks)

Answer any five questions from the following.

- 2.a) What do you mean by research process? Explain the different types of research. [5]
- b) What is a research problem? State the components of a research problem. [5]
- 3.a) Discuss the criteria to select a good research problem? [5]
- b) Define hypothesis and discuss the need for hypothesis in social research? [5]
- 4.a) Write the differences between questionnaires and schedules. [5]
- b) Write down the procedures for preparing a thesis report? [5]
- 5.a) Write down the characteristics of secondary data collection? [5]
- b) What are the various operations are involved for processing the collected data? [5]
- 6.a) Explain the techniques of thesis writing? [5]
- b) Give an account of different types of computers and search engines which are useful in carrying out research? [5]
- 7 a) Sample of sales in similar shops in two towns are taken for a new product with the following results. [5]

Town	Mean sales	Variance	Size of sample
A	57	5.3	5
B	61	4.8	7

Is there any evidence of difference in sales in the two tons? Use 5% level of significance for testing this difference between the means of two samples.



- b) The following table gives the monthly sales (in thousand rupees) of a firm in three states by its four salesmen : [5]

States	Salesmen				Total
	A	B	C	D	
X	5	4	4	7	20
Y	7	8	5	4	24
Z	9	6	6	7	28
Total	21	18	15	18	72

Set up an analysis of variance table for the above information.

8. Write short notes on

- a) Measurement scales
- b) ANOVA

[5]
[5]

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