

Printed Pages: 01

Subject Code: MTCC101

Paper Id: **299001**

Roll No:

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M TECH

**(SEM-I) THEORY EXAMINATION, 2018-19
RESEARCH PROCESS & METHODOLOGY**

Time: 03 Hours

M.M.: 70

Notes: Assume any Missing Data.

SECTION A

Q1: Attempt all parts. All parts having equal marks.

(7x2=14)

- Differentiate between research method and methodology.
- Discuss the objectives of a research.
- Give the classification of research design?
- What are the various steps of research process?
- Differentiate between probability and non-probability methods of sampling techniques.
- Distinguish between null hypothesis and alternative hypothesis.
- What is a research report?

SECTION B

Q.2.: Attempt Three parts

(3x7=21)

- What do you mean by research? Discuss the significance of research.
- Enumerate the difference methods of data collection. Clearly explain the difference between collection of data through questionnaires and schedules.
- Discuss the before-and-after with and without control design in context of a research design.
- Discuss the Karl Pearson's coefficient of correlation. Calculate the Karl Pearson's coefficient of correlation from the following data:

Roll No. of students	Marks in Math	Marks in Science
1	48	45
2	35	20
3	17	40
4	23	25
5	47	45

- Explain the significance of research report and narrate the various steps involved in writing such a report.

SECTION C

Q3. Attempt all parts

(5x7=35)

- What is a research problem? Explain the techniques involved in defining a research problem.
- Explain the meaning and significance of research design. Differentiate between Random Replication and Randomized Block research designs.
- Discuss the stratified random sampling design with a suitable example. How would you select such a sample?
- What is a hypothesis? Discuss the parametric tests of hypotheses in detail.
- Write short notes on the following:
 - Indexing and citation of journals
 - Intellectual property.