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M.Tech. (ME) (Sem.-2nd)

## RESEARCH METHODOLOGY

Subject Code: MME-502 Paper ID: [E0402]

Time: 3 Hrs.

Max. Marks: 100

## INSTRUCTION TO CANDIDATES:

- 1. Attempt any FIVE questions out of EIGHT questions.
- 2. Each question carry TWENTY marks.
- 1. Identify the research issue in the area of your choice and draft the research process in detail.
- 2. What is Sample Design? What factors researcher should consider in developing a sample design for the research project? (4 + 16 = 20)
- 3. Describe the essential constituents of Research Proposal. (20)
- 4. Describe different types of sources of Primary Data Collection. (20)
- 5. What is Regression Analysis? When it is used? Describe the process of stepwise regression analysis. How the regression output is interpreted?
  - (4+4+8+4=20)
- 6. a. State and explain standard normal distribution. What are the characteristics and applications of normal distribution? (4 + 6 = 10)
  - b. How can Poisson distribution be approximated by the normal distribution?
  - c. Explain Central Limit Theorem.
- 7. Briefly explain the essentials of different components of Research Report.
- 8. Describe Randomized Block Design with a suitable example. Differentiate between completely randomized design and blocked design



(15 + 5 = 20)

(4)