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Total No. of Pages : 01

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M.Tech.(ECE/Emb. Sys/EPDT/VLSI D) (2016 Batch) (Sem.–1)

**RESEARCH METHODOLOGY**

Subject Code : MTRM-101

Paper ID : [74130]

Time : 3 Hrs.

Max. Marks : 100

**INSTRUCTION TO CANDIDATES :**

1. Attempt any FIVE questions out of EIGHT questions.
2. Each question carries TWENTY marks.

1. List and explain the objectives of research. What is meant by formulation of a research problem? Discuss the basis and scope for formulating it.
2. What do you understand by a hypothesis? Discuss the various kinds of hypothesis. Also describe the steps in the formulation of a hypothesis.
3. Find the mean income and median income from the following data of the staff of an insurance company :

<b>Income(in Rs' 000)</b>	20	22	24	26	28	30	32	34
<b>No. of employees</b>	12	16	19	23	21	18	17	13

4. Estimate the value of Y, for X = 28

<b>X</b>	10	12	14	16	18	20	22	24
<b>Y</b>	102	97	109	116	103	119	122	126

5. What do you mean by tests of significance? What is their utility in research process? Explain any 2 tests of significance.
6. Discuss the principles of design of experiments. Also explain what is meant by randomized block designs. What is their utility in carrying out research?
7. Explain the significance of bibliography and references. Discuss the methodologies used in quoting references. Also explain how is bibliography prepared for a research report.
8. List some of the important softwares available for statistical analysis. Explain the features of any one in detail.