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Total No. of Printed Pages: [1]

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**M. Tech. Textile (Part-Time) (Semester – 5<sup>th</sup>)**

**RESEARCH METHODOLOGY & IPR**

**Subject Code: MREMI0101**

**Paper ID: [22201119]**

**Time: 03 Hours**

**Maximum Marks: 60**

**Instruction for candidates:**

1. Section A is compulsory. It carries 16 marks. It consists of 4 questions of 4 marks each.
2. Section B consist of 4 questions of 8 marks each. The student has to attempt any 3 questions out of it.
3. Section C consist of 3 questions of 10 marks each. The student has to attempt any 2 questions.

**Section – A**

**(4 marks each)**

- Q1. Explain the sources of information of literature survey.
- Q2. What is the difference between trade and copyright?
- Q3. Enlist the characteristics required to frame a good research problem.
- Q4. What are the primary and secondary sources of data? How the validation of data is achieved?

**Section – B**

**(8 marks each)**

- Q5. Summarize the literature review functions in research work and state the way in which it can help the research.
- Q6. What is innovation? Elucidate various types of innovation.
- Q7. Distinguish between probability sampling and non-probability sampling techniques.
- Q8. What is the basic principle of experimental design? Hence explain the difference between randomized and completely randomized block.

**Section – C**

**(10 marks each)**

- Q9. What are various data collection tools? Elaborate the data collection types and their techniques.
- Q10. What is research hypothesis? Enlist its types. Explain the procedure required for the formulation of hypothesis during the preparation and submission of a research proposal.
- Q11. Explain the new developments in intellectual property rights. Hence explain the procedure for obtaining grants of patents.