

**SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY:: PUTTUR**  
(AUTONOMOUS)

**MCA I Year I Semester Regular Examinations December-2025**

**RESEARCH METHODOLOGY AND IPR**

**Time: 3 Hours**

(Answer all Five Units 5 x 12 = 60 Marks)

**Max. Marks: 60**

**UNIT-I**

- |   |   |  |     |    |    |
|---|---|--|-----|----|----|
| 1 | a | Apply data interpretation methods to a hypothetical dataset. | CO1 | L3 | 6M |
|   | b | Describe the role of instrumentation in research.            | CO1 | L2 | 6M |

**OR**

- |   |   |  |     |    |    |
|---|---|--|-----|----|----|
| 2 | a | Explain common errors made in selecting a research problem.                | CO1 | L2 | 6M |
|   | b | Illustrate the scope and objectives of a research problem with an example. | CO1 | L2 | 6M |

**UNIT-II**

- |   |   |  |     |    |    |
|---|---|--|-----|----|----|
| 3 | a | Differentiate between technical writing and general writing. | CO2 | L4 | 6M |
|   | b | Explain the structure of a standard research paper.          | CO2 | L2 | 6M |

**OR**

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|---|---|---|-----|----|----|
| 4 | a | Justify why research proposals must undergo committee review before approval. | CO2 | L5 | 6M |
|   | b | Design a checklist for plagiarism-free research writing.                      | CO2 | L6 | 6M |

**UNIT-III**

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|---|---|---|-----|----|----|
| 5 | a | Explain patents with suitable examples.                             | CO3 | L2 | 6M |
|   | b | Differentiate between patents, designs, trademarks, and copyrights. | CO3 | L2 | 6M |

**OR**

- |   |   |   |     |    |    |
|---|---|---|-----|----|----|
| 6 | a | Identify the requirements for filing a patent application.  | CO3 | L1 | 6M |
|   | b | Evaluate the importance of copyrights in academic research. | CO3 | L5 | 6M |

**UNIT-IV**

- |   |   |  |     |    |    |
|---|---|--|-----|----|----|
| 7 | a | Define patent rights and explain their importance. | CO4 | L1 | 6M |
|   | b | List the scope and limitations of patent rights.   | CO4 | L1 | 6M |

**OR**

- |   |   |   |     |    |    |
|---|---|---|-----|----|----|
| 8 | a | Apply licensing principles to a real-world industrial example.      | CO4 | L3 | 6M |
|   | b | Evaluate the role of geographical indications in rural development. | CO4 | L5 | 6M |

**UNIT-V**

- |   |   |  |     |    |    |
|---|---|--|-----|----|----|
| 9 | a | Explain new developments in IPR related to biological systems. | CO5 | L2 | 6M |
|   | b | Describe the application of IPR in computer software.          | CO5 | L2 | 6M |

**OR**

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|----|---|---|-----|----|----|
| 10 | a | Design a framework for protecting indigenous knowledge in your region.        | CO5 | L6 | 6M |
|    | b | Propose strategies for effective IPR administration in academic institutions. | CO5 | L6 | 6M |

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