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Question Paper Code	12412
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**M.E. / M.Tech - DEGREE EXAMINATIONS, NOV / DEC 2023**

First Semester

**M.E. - Big Data Analytics**

**20PBDMC101 - RESEARCH METHODOLOGY AND IPR**

(Regulations 2020)

Duration: 3 Hours

Max. Marks: 100

**PART - A (10 × 2 = 20 Marks)**

Answer ALL Questions

- |  | <i>Marks,<br/>K-Level, CO</i> |
|--|-------------------------------|
| 1. What is Hypothesis?   | <i>2,K1,CO1</i>               |
| 2. List out the data presentation tools.                                       | <i>2,K1,CO1</i>               |
| 3. What is ethics in research? Why it is important?                            | <i>2,K2,CO2</i>               |
| 4. Define plagiarism.  | <i>2,K1,CO2</i>               |
| 5. List out the items of introductory pages.                                   | <i>2,K1,CO3</i>               |
| 6. Define content of a research report.  | <i>2,K1,CO3</i>               |
| 7. What is a Patent?   | <i>2,K1,CO4</i>               |
| 8. How to select a good trademark?   | <i>2,K2,CO4</i>               |
| 9. What is a Geographical Indication?  | <i>2,K1,CO5</i>               |
| 10. What are the limitations of IP based protection for Traditional Knowledge? | <i>2,K1,CO5</i>               |

**PART - B (5 × 13 = 65 Marks)**

Answer ALL Questions

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|---|------------------|
| 11. a) Define Research problem. List out the objectives of Research Problem? Explain different sources of research problem. | <i>13,K2,CO1</i> |
| <b>OR</b>   |                  |
| b) Discuss in detail about investigation of solutions for research problem, data collection, analysis, interpretation.      | <i>13,K2,CO1</i> |
| 12. a) List out various methods of conducting literature survey and explain them in detail with an example.                 | <i>13,K3,CO2</i> |
| <b>OR</b>   |                  |
| b) (i) Explain how plagiarism can be detected using online tools.   | <i>7,K3,CO2</i>  |
| (ii) Discuss the five principles of research ethics.  | <i>6,K3,CO2</i>  |

13. a) Explain the significance of a research report and narrate the various steps involved in writing a report. *13,K3,CO3*
- OR**
- b) Explain in detail on Effective technical writing. *13,K3,CO3*
14. a) Explain about different types of Intellectual property. *13,K2,CO4*
- OR**
- b) Describe how monopoly nature of owner is controlled by Patent Trademark Organization? *13,K2,CO4*
15. a) Explain the inventions that are patentable and not patentable in India. *13,K3,CO5*
- OR**
- b) Discuss in detail about Licensing and transfer of technology in patent rights. *13,K3,CO5*

**PART - C (1 × 15 = 15 Marks)**

16. a) Derive an application for registration of different types of marks in PTO and an Indian IPR organization. *15,K2,CO4*
- OR**
- b) Discuss in detail about the Procedure for grants of patents. *15,K3,CO4*