

Reg. No.

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M.E / M.TECH. DEGREE EXAMINATIONS, MAY 2024

Second Semester

GR22251 – INTRODUCTION TO RESEARCH METHODOLOGY AND IPR*(Common to all branches)***(Regulation 2022)****TIME: 3 HOURS****MAX. MARKS: 100**

COURSE OUTCOMES	STATEMENT	RBT LEVEL
CO 1	Critically evaluate any research article based upon research methodology.	4
CO 2	Correlate the results of any research and develop hypothesis, concept, theory and model.	4
CO 3	Developing a research proposal, research presentation and review article in the field of engineering.	4
CO 4	Enumerate the importance of intellectual property right in research.	3
CO 5	Develop proposal for patent rights and identify the new developments in IPR	3

PART- A (20 x 2 = 40 Marks)*(Answer all Questions)*

	CO	RBT LEVEL
1. List the characteristics of good research problem.	1	2
2. Write the significance of formulating the hypothesis in research work.	1	2
3. List the various methods of collecting primary data.	1	2
4. How plagiarism can be detected using online tools.	1	2
5. Distinguish between artifacts and true results in research.	2	2
6. List the different methods and techniques available for recording research result.	2	2
7. Explain the important statistical measures of research data.	2	2
8. Write the significance of negative results in research.	2	2
9. outline the steps involved in writing a comprehensive and coherent research report.	3	2
10. Briefly explain the Journal Impact Factor.	3	2
11. List out the stages for preparation of a research report.	3	2
12. List the merits and demerits of oral presentation.	3	2
13. Enumerate the benefits and challenges associated with patenting inventions or processes.	4	2
14. If an independent third party develops a program for a company, who owns the copyright?	4	3
15. Deduce the difference between creating, inventing, and innovating?	4	3
16. Write the role of Patent Cooperation Treaty.	4	2
17. Mention the things which come under exceptions to infringement.	5	2

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|-----|--|---|---|
| 18. | List the patent office in India and its category. | 5 | 2 |
| 19. | Predict the law which protects the logos of companies? Identity the law with examples. | 5 | 3 |
| 20. | List at least 5 geographical indications tagged products in India. | 5 | 2 |

PART- B (5 x 10 = 50 Marks)

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LEVEL |
|---------|---|-------|----|--------------|
| 21. (a) | (i) Give various definitions of research explaining its meaning and scope. | (5) | 1 | 3 |
| | (ii) Describe the steps involved in research process. | (5) | 1 | 3 |
| | (OR) | | | |
| (b) | Discuss the importance of critical literature review and its uses in planning innovation research | (10) | 1 | 3 |
| 22. (a) | Explain the importance of scientific methodology in recording results and analysis of negative results using a case study of your own choice. | (10) | 2 | 3 |
| | (OR) | | | |
| (b) | Explain the meaning of sampling and non-sampling errors. List the various sources of these errors and elaborate in detail. | (10) | 2 | 3 |
| 23. (a) | Explain essential features of report writing highlighting the importance and implication of research outcomes. | (10) | 3 | 3 |
| | (OR) | | | |
| (b) | Analyze the criteria considered by a review committee in assessing a research proposal. | (10) | 3 | 3 |
| 24. (a) | Write short notes on the following: (a) Patents (b) Designs (c) Trade Marks (d) Copyright | (10) | 4 | 3 |
| | (OR) | | | |
| (b) | Describe the structure and content of a patent document in general. | (10) | 4 | 3 |
| 25. (a) | Elucidate the latest developments in IPR of Biological system. | (10) | 5 | 3 |
| | (OR) | | | |
| (b) | Explain new developments in Intellectual Property Rights. | (10) | 5 | 3 |

PART- C (1 x 10 = 10 Marks)

(Q.No.26 is compulsory)

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LEVEL |
|-----|---|-------|----|--------------|
| 26. | Assume a research topic of your choice and give the complete format of its research report. | (10) | 3 | 5 |
