



# Siddaganga Institute of Technology, Tumakuru-572 103

(An Autonomous Institution affiliated to VTU, Belagavi, Approved by AICTE, New Delhi)

## First Semester Master of Technology Examinations June 2024

### Research Methodology and IPR

Time: 3 Hours

Max. Marks: 100

**Note :** 1. Revealing of Identity in any form in the answer book will be treated as malpractice.  
2. Answer any five questions choosing one full question from each unit.

#### Unit - I

- |   | M  | BL | CO | PO  | PSO |
|---|----|----|----|-----|-----|
| 1 a) Distinguish between Research methods and Research methodology.   | 10 | 2  | 1  | 1,2 |     |
| b) "Research is very much concerned with proper fact finding analysis and evaluation" Do you agree with this statement. Give any three reasons in support of your answer with examples. | 10 | 2  | 1  | 1,2 |     |

#### OR

- |  |    |   |   |     |  |
|--|----|---|---|-----|--|
| 2 a) What do you think researches need to be ethical in conducting and reporting research? Mention some of the guidelines for ethical practices in research.   | 10 | 2 | 1 | 1,2 |  |
| b) Mention any five criteria which needs to be satisfied for qualifying any research as being "Good research". Is it applicable for all fields are limited to research in science and technology? Clarify with examples. | 10 | 2 | 1 | 1,2 |  |

#### Unit - II

- |   |    |   |   |     |  |
|---|----|---|---|-----|--|
| 3 a) Discuss the technique involved in defining a problem for the conduction of research. Why is it important for researchers to clearly state basic assumptions or postulates (if any) relying to the research problem? Discuss with examples. | 10 | 2 | 2 | 1,2 |  |
| b) List type of iterative survey. Explain in detail any three of the surveys and their significance in supporting research process.   | 10 | 2 | 2 | 1,2 |  |

#### OR

- |   |    |   |   |     |  |
|---|----|---|---|-----|--|
| 4 a) What is research problem? Determine the main issues which shared receive the attention of the researcher in formulating the research problem. Give suitable examples in elucidate your points. | 10 | 2 | 2 | 1,2 |  |
| b) Discuss briefly the importance of literature review in defining a research problem.  | 10 | 2 | 2 | 1,2 |  |

#### Unit - III

- |  |    |   |   |     |  |
|--|----|---|---|-----|--|
| 5 a) "Research design in exploratory studies must be flexible but in descriptive studies, it must minimize bias and maximize reliability" Discuss. | 10 | 2 | 3 | 1,2 |  |
| b) Describe some of the important research designs used in experimental hypothesis-testing type research study.                                    | 10 | 2 | 3 | 1,2 |  |

#### OR

- |   |    |   |   |     |  |
|---|----|---|---|-----|--|
| 6 a) Distinguish between<br>i) Restricted and unrestricted sampling<br>ii) Convenience and purpose sampling<br>iii) Systematic and stratified sampling<br>iv) Cluster and area sampling | 10 | 2 | 3 | 1,2 |  |
| b) Under what circumstances would you recommend:<br>i) A probability sample<br>ii) A non-probability sample<br>iii) A stratified sample<br>iv) A cluster sample                         | 10 | 2 | 3 | 1,2 |  |

**Unit - IV**

**7** a) Briefly discuss the following scales:

- i) Likert scale
- ii) Semantic Differential scale
- iii) Stapel scale

Give an example for each of the above scales as applied to research.

10 2 4 1,2

b) Enumerate the different methods of collecting data. Which one of the methods is the most suitable for conducting enquiry regarding family welfare programme in India? Discuss the merits and demerits.

10 2 4 1,2

**OR**

**8** a) What points will you keep in mind while

- i) Preparing a research report? Explain
- ii) What are the different forms in which a research work may be reported. Describe.

10 2 4 1,2

b) Decide whether the following represent nominal, ordinal, interval or ratio data. Explain your answer.

- i) Temperature measured on the kelvin scale
- ii) Aadhar numbers
- iii) Number of passengers travelling from Bangalore to Mysore
- iv) Military ranks (cader)
- v) Pin code

10 2 4 1,2

**Unit - V**

**9** a) What are the various forms of Intellectual property? Give an example for works that can be protected through these forms of Intellectual Property Rights instruments.

10 2 5 1,2

b) What is the role of WIPO in the context of Intellectual Property agreements between member nations in the global context?

10 2 5 1,2

**OR**

**10** a) Discuss the salient features of the Indian patent act. Outline the procedure for filing a patent in India.

10 2 5 1,2

b) When do you apply for design registration? Give some examples of works that can be protected through the Design Act. 2000. Mention the significance of design registration.

10 2 5 1,2

---