B.M.S. College of Engineering, Bengaluru-560019

Autonomous Institute Affiliated to VTU

June 2025 Semester End Main Examinations

Programme: B.E.   **Semester: VII**

Branch: Artificial Intelligence and Machine Learning   **Duration: 3 hrs.**

Course Code: 24AM7PCRMD   **Max Marks: 100**

Course: RESEARCH METHODOLOGY

Instructions: 1. Answer any FIVE full questions, choosing one full question from each unit.
2. Missing data, if any, may be suitably assumed.

			UNIT - I	CO	PO	Marks
	1	a)	Discuss the types of variables with suitable examples.	CO1	PO1	**07**
		b)	Describe the flow chart of various stages of research designing.	CO1	PO1	**07**
		c)	Illustrate descriptive research differs from analytical research.	CO2	PO2	**06**
			OR			
	2	a)	Evaluate the impact of quantitative data on the performance of AI models.	CO3	PO2	**07**
		b)	Outline the various stages of research from a machine learning prospective.	CO2	PO2	**07**
		c)	Discuss the importance of empirical research.	CO1	PO1	**06**
			UNIT - II			
	3	a)	Elaborate the sources for literature search with appropriate examples.	CO1	PO1	**07**
		b)	Describe the concept of conceptual framework.	CO1	PO1	**07**
		c)	Discuss the Randomized block design and Latin square design.	CO2	PO2	**06**
			OR			
	4	a)	Outline the process of conducting a literature survey with suitable examples.	CO2	PO2	**07**
		b)	Describe the research designs with suitable example.	CO2	PO2	**07**
		c)	Discuss the experimental design and their importance.	CO1	PO1	**06**
			UNIT - III			
	5	a)	Describe the methods of data collection and the tools used for it.	CO1	PO1	**07**

Important Note: Completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages. Revealing of identification, appeal to evaluator will be treated as malpractice.

				CO	PO	
		b)	What are the main sources of errors in data collection and research?	CO1	PO1	**07**
		c)	Elaborate the semantic differential scale.	CO2	PO2	**06**
			OR			
	6	a)	Describe the Delphi Technique flowchart for research.	CO2	PO2	**07**
		b)	Explain the concept of a completely randomized design.	CO2	PO2	**07**
		c)	What is stratified sampling? Describe the revisit of stratified sampling.	CO1	PO1	**06**
			UNIT - IV			
	7	a)	Define Questionnaire. Elaborate the steps involved in questionnaire.	CO2	PO2	**07**
		b)	Define data collection. Describe the data collection sources.	CO2	PO2	**07**
		c)	Discuss the other forms of data collection with suitable example.	CO2	PO2	**06**
			OR			
	8	a)	Describe the data collection tools and discuss it.	CO1	PO1	**07**
		b)	Define schedule. Illustrate the essentials of a good schedule.	CO2	PO2	**07**
		c)	Distinguish between questionnaire and schedule.	CO2	PO2	**06**
			UNIT - V			
	9	a)	Illustrate the Interpretation communication and techniques.	CO1	PO1	**07**
		b)	Elaborate various steps involved in report writing and their significance.	CO2	PO2	**07**
		c)	Evaluate the accuracy and completeness of the references provided in a sample report writing.	CO2	PO3	**06**
			OR			
	10	a)	Illustrate the precautions needs to follow for writing research reports.	CO2	PO2	**07**
		b)	Discuss the types of reports. Brief the layout of research report.	CO2	PO2	**07**
		c)	Brief the precaution measures for oral presentations.	CO1	PO1	**06**

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