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

Autonomous Institute Affiliated to VTU

January / February 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.

				CO	PO	Marks
			UNIT - I	*CO*	*PO*	**Marks**
	1	a)	Illustrate the factors for motivation of research.	*CO1*	*PO1*	**06**
		b)	Distinguish between the conceptual research and empirical research.	*CO2*	*PO2*	**06**
		c)	Outline the various stages of research from a Machine learning prospective.	*CO3*	*PO2*	**08**
			OR			
	2	a)	Discuss in detail the procedure of selecting a problem statement.	*CO1*	*PO1*	**06**
		b)	Distinguish Qualitative research vs. Quantitative research.	*CO2*	*PO2*	**06**
		c)	Elaborate the criteria for good research with suitable examples.	*CO3*	*PO2*	**08**
			UNIT - II			
	3	a)	Describe the steps involved in research hypothesis.	*CO1*	*PO1*	**06**
		b)	Explain the observational design study.	*CO1*	*PO1*	**06**
		c)	Elaborate the process of conducting a literature survey with suitable examples	*CO3*	*PO2*	**08**
			OR			
	4	a)	Describe the research designs with suitable example.	*CO1*	*PO1*	**06**
		b)	Explain the concept of conceptual framework.	*CO1*	*PO1*	**06**
		c)	Elaborate on the control variables typically considered in a research design.	*CO2*	*PO2*	**08**
			UNIT - III			
	5	a)	Describe the Delphi Technique flowchart.	*CO2*	*PO2*	**06**
		b)	Illustrate Characteristics of a good sample design.	*CO2*	*PO2*	**06**

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	
		c)	What is stratified sampling? Describe the revisit of stratified sampling.	*CO2*	*PO2*	**08**
			OR			
6		a)	Describe the details of multidimensional Scaling	*CO1*	*PO1*	**06**
		b)	Discuss the scaling technics in research methodology.	*CO1*	*PO1*	**06**
		c)	Elaborate the experimental design and their importance.	*CO2*	*PO2*	**08**
			UNIT - IV			
7		a)	Describe the Case Study Method.	*CO1*	*PO1*	**06**
		b)	Illustrate the various data collection tools.	*CO2*	*PO2*	**06**
		c)	Distinguish between primary and secondary data sources.	*CO2*	*PO2*	**08**
			OR			
8		a)	Outline the different forms of data collection.	*CO1*	*PO1*	**06**
		b)	Discuss the different sources of data collection.	*CO1*	*PO1*	**06**
		c)	Elaborate the steps involved in Questionnaire.	*CO2*	*PO2*	**08**
			UNIT - V			
9		a)	Describe the report writing of introduction and literature survey in research report.	*CO2*	*PO2*	**06**
		b)	Discuss the types of report writing.	*CO2*	*PO2*	**06**
		c)	Analyze the referencing styles used in peer-reviewed papers across different journals.	*CO2*	*PO2*	**08**
			OR			
10		a)	Describe the steps in research report on data collection and data analysis	*CO2*	*PO2*	**06**
		b)	Discuss the interpretation communication and their techniques	*CO2*	*PO2*	**06**
		c)	Elaborate the structure of research report	*CO2*	*PO2*	**08**

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