

U.S.N.

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

Autonomous Institute Affiliated to VTU

June / July 2025 Semester End Main Examinations**Programme: B.E.****Semester: V****Branch: Civil Engineering****Duration: 3 hrs.****Course Code: 23CV5AERMY****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.

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.			UNIT - I	<i>CO</i>	<i>PO</i>	Marks
	1	a)	Explain the different types of Engineering Research.	<i>CO1</i>	<i>PO2</i>	10
		b)	Explain the merits of searching the web as a source before starting any research.	<i>CO1</i>	<i>PO2</i>	10
			OR			
	2	a)	Elaborate on ethical issues/ misconduct related to authorship in research.	<i>CO1</i>	<i>PO2</i>	10
		b)	Compare fundamental and analytical research with relevant example.	<i>CO1</i>	<i>PO2</i>	10
			UNIT - II			
	3	a)	Elaborate on the steps involved in sampling design.	<i>CO1</i>	<i>PO2</i>	10
		b)	Explain different types of paired comparison of scaling techniques	<i>CO1</i>	<i>PO2</i>	10
			OR			
	4	a)	Explain the concepts of data validation in research.	<i>CO1</i>	<i>PO2</i>	10
		b)	Elucidate the steps involved in developing a research plan using a flow chart to illustrate the process.	<i>CO1</i>	<i>PO2</i>	10
			UNIT - III			
	5	a)	Explain the impact of title and keywords on citations	<i>CO1</i>	<i>PO2</i>	10
		b)	Elaborate on knowledge flow through citations	<i>CO1</i>	<i>PO2</i>	10
			OR			
	6	a)	Explain the need for acknowledgement in books and dissertation.	<i>CO1</i>	<i>PO2</i>	10
		b)	Describe the functions of citations and attributions.	<i>CO1</i>	<i>PO2</i>	10

			UNIT - IV			
	7	a)	Compare the different techniques of interpretation and analyze their suitability for qualitative and quantitative data.	CO2	PO1	10
		b)	Analyze the structure and components of a scientific report. What are the key elements that enhance readability and effectiveness?	CO2	PO1	10
			OR			
	8	a)	How does the use of illustrations and tables in reports affect the comprehension of complex data?	CO2	PO1	10
		b)	A scientific report lacks proper structure and clarity. Identify the issues in the layout and suggest improvements.	CO2	PO1	10
			UNIT - V			
	9	a)	Analyze the Basmati rice patent case and evaluate its implications for intellectual property rights in agriculture.	CO3	PO1	10
		b)	Evaluate the effectiveness of IP organizations in India. What programs have been successful in fostering innovations.	CO3	PO1	10
			OR			
	10	a)	Examine the rights associated with patents and explain how they protect inventors' interests while promoting public access.	CO3	PO1	10
		b)	Analyze the conditions for obtaining patent protection. Why are these conditions crucial for maintaining innovation standards?	CO3	PO1	10
