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

Autonomous Institute Affiliated to VTU

January / February 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.

			UNIT - I		CO	PO	Marks
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.	1	a)	What is research and discuss various stages involved in research process flow.		<i>CO1</i>	<i>PO2</i>	10
		b)	Outline the significance of conducting literature survey in research and differentiate between primary and secondary sources of literature.		<i>CO1</i>	<i>PO2</i>	10
	OR						
	2	a)	Explain the key characteristics of research.		<i>CO1</i>	<i>PO4</i>	10
		b)	Identify and analyze different types of research misconduct with relevant examples.		<i>CO1</i>	<i>PO4</i>	10
	UNIT - II						
	3	a)	Explicate good and bad research practices by assessing their impact.		<i>CO1</i>	<i>PO2</i>	10
		b)	Elucidate various methods available for data collection of data for performing research.		<i>CO1</i>	<i>PO2</i>	10
	OR						
	4	a)	Compare exploratory, explanatory and descriptive research, and provide suitable examples related to civil engineering stream.		<i>CO1</i>	<i>PO3</i>	10
		b)	Examine sequential steps involved in sampling design required in achieving reliable research outcome.		<i>CO1</i>	<i>PO3</i>	10
			UNIT - III				
5	a)	Analyze the importance of citations in research publications.			<i>CO1</i>	<i>PO3</i>	10

	b)	Examine the role of acknowledgements in research publication and justify their significance in fostering research practices.	CO1	PO3	10
		OR			
6	a)	Evaluate the need of title and keywords of a research article in searching the literature.	CO1	PO3	10
	b)	Analyze the following aspects of citations: i. Different citation styles ii. Dataset citation	CO1	PO3	10
		UNIT - IV			
7	a)	Identify and assess different techniques available for interpretation of data in research.	CO2	PO4	10
	b)	Assess the need and significance of a report in research.	CO2	PO4	10
		OR			
8	a)	Explicate the layout of a technical report.	CO2	PO2	10
	b)	Elucidate the steps involved in report writing required for the award of civil engineering degree.	CO2	PO2	10
		UNIT - V			
	a)	Discuss the aspects of following intellectual property rights: i. Patent criteria ii. Copyright items	CO3	PO2	10
	b)	Examine the rights associated with patents and evaluate their implications for researchers and innovators.	CO3	PO2	10
		OR			
10	a)	Discuss the importance of the following intellectual property rights: i. Geographical indication ii. Trademark	CO3	PO4	10
	b)	Explain any two case study on patent infringement.	CO3	PO4	10
