U.S.N.										

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

Autonomous Institute Affiliated to VTU

February / March 2025 Semester End Main Examinations

Programme: B.E. **Semester: I / II**
Branch: Common to all Branches **Duration: 3 hrs.**
Course Code: 22CV1ESGBT / 22CV2ESGBT **Max Marks: 100**
Course: GREEN BUILDINGS

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	*CO*	*PO*	**Marks**
1	a)		Illustrate how stabilized mud blocks can be used as an alternative for concrete blocks in eco-friendly housing projects.	*CO1*	*PO7*	**10**
	b)		Assess the environmental impact of quarrying stone for construction. Suggest remedial measures to control it	*CO1*	*PO7*	**10**
			OR			
2	a)		Explain the significance of fiber-reinforced polymer composites in modern construction.	*CO1*	*PO7*	**10**
	b)		How is lime pozzolana cement a better alternative to conventional cement? Explain its manufacturing process	*CO1*	*PO7*	**10**
			UNIT - II			
3	a)		Compare the characteristics of filler slab roofing and composite beam concrete deck roofing with suitable sketches	*CO2*	*PO6*	**12**
	b)		Justify the role of nonprofit organizations in promoting cost-effective construction techniques.	*CO2*	*PO6*	**08**
			OR			
4	a)		Demonstrate the use of pre-cast concrete elements in rapid construction projects.	*CO2*	*PO6*	**10**
	b)		Describe how ferrocement differs from conventional concrete in construction.	*CO2*	*PO6*	**10**
			UNIT - III			
5	a)		Illustrate the impact of embodied energy in materials on the overall sustainability of a building.	*CO3*	*PO7*	**10**
	b)		Describe the necessity of green buildings in mitigating climate change.	*CO3*	*PO7*	**10**
			OR			
6	a)		Assess the effectiveness of global efforts to reduce carbon emissions in the building sector.	*CO3*	*PO7*	**10**
	b)		Explain how buildings contribute to global warming and carbon footprint.	*CO3*	*PO7*	**10**

			UNIT - IV			
	7	a)	Explain the purpose of BREEAM, LEED, GREEN STAR, and GRIHA.	*CO4*	*PO7*	**10**
		b)	Examine how integrated lifecycle design affects material performance.	*CO4*	*PO7*	**10**
			OR			
	8	a)	Explain the lifecycle design process for sustainable materials	*CO4*	*PO7*	**10**
		b)	Demonstrate how the rating system works in GRIHA certification.	*CO4*	*PO7*	**10**
			UNIT - V			
	9	a)	Demonstrate the different practices as to how solid waste can be efficiently managed in green buildings.	*CO5*	*PO7*	**10**
		b)	Identify the different approaches to water efficiency in buildings	*CO5*	*PO7*	**10**
			OR			
	10	a)	Illustrate the concept of solar passive heated building with a suitable case study	*CO5*	*PO7*	**10**
		b)	Describe the role of green cover in the urban environment.	*CO5*	*PO7*	**10**

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