

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

Autonomous Institute Affiliated to VTU

## December 2023 Supplementary Examinations

**Programme:** B.E.

**Branch:** Common to all Branches

**Course Code:** 22CV1ESGBT / 22CV2ESGBT

**Course:** Green Buildings

**Semester:** I / II

**Duration:** 3 hrs.

**Max Marks:** 100

**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)	With relevant illustration, Justify as to how usage of Stabilized mud block is beneficial when compared to conventional solid concrete blocks/ burnt clay bricks in achieving sustainability and cost-effectiveness.	CO2	PO7	10
		b)	Do you think recycling and reuse of building materials a feasible option in place of virgin building materials? Give suitable justifications for it	CO1	PO7	10
			OR			
	2	a)	How is the quarrying process detrimental to the environment? Can you suggest remedial measures to reduce the impact of it on the environment	CO3	PO7	10
		b)	How can bamboo serve as a versatile building material for various structural elements within buildings? Give some suitable illustrations for its usage in buildings	CO2	PO7	10
			UNIT - II			
	3	a)	How is Pre-engineered construction different from conventional form of construction? Can you provide some illustrations of utilization of this concept in buildings?	CO2	PO7	10
		b)	Explain the technical characteristics of ferro-cement building methods and discuss effective ways in which ferro-cement can be utilized in construction, supported by illustrative examples.	CO2	PO7	10
			or			
	4	a)	Describe the following with a sketch i) Filler slab ii) Jack arch roofing	CO1	PO6, 7	10
		b)	Under what circumstances rat-trap bond is advantageous to adopt? Compare its characteristics with conventional Flemish bond	CO1	PO6,7	10

		<b>UNIT - III</b>			
5	a)	In what way do you think the present day buildings and infrastructure sector are contributing to increased Global warming? Give some illustrations to justify it.	CO3	PO7	<b>10</b>
	b)	What is the necessity to adopt the concept of green buildings in today's context? In what way are they beneficial to the society and earth.	CO3	PO7	<b>10</b>
		<b>UNIT - IV</b>			
6	a)	Describe the "LEED" green rating system for buildings	CO4	PO7	<b>10</b>
	b)	Explain the concept "Integrated Life cycle design of Materials and structure"	CO4	PO7	<b>10</b>
		<b>UNIT - V</b>			
7	a)	What strategies can be adopted to manage the sullage water and sewage generated in buildings? Give some illustrations.	CO5	PO7,9	<b>10</b>
	b)	Describe the concept of solar passive cooling techniques which can be adopted in buildings to save energy. Explain any one technique In detail.	CO5	PO7,9	<b>10</b>

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