

**IV B. TECH I SEMESTER REGULAR EXAMINATIONS, NOVEMBER - 2023**  
**GREEN BUILDINGS**  
**(COMMON TO ECE, CSE&CSM BRANCHES)**

Time: 3 hours

Max. Marks: 70

**Note : Answer ONE question from each unit (5 × 14 = 70 Marks)**

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UNIT-I

1. a) Can you recall the major components of the Energy Conservation in India? [7M]  
b) Explain the importance of Green Building and its relevance. [7M]

(OR)

2. a) Can you discuss the relationship between water conservation strategies and energy-efficient buildings? [7M]  
b) Elaborate the different types of energy. [7M]

UNIT-II

3. a) Can you recall the factors influencing microclimate in a specific geographical area? [7M]  
b) Explain the significance of integrating renewable energy sources into the design of energy-efficient buildings. [7M]

(OR)

4. Classify and explain in detail about Solar PV Generating Systems. [14M]

UNIT-III

5. a) What are the key components of a Building Form Development Plan? [7M]  
b) How do various thermal insulation materials differ in terms of their effectiveness and application? [7M]

(OR)

6. Explain any effective shading strategy for a building based on its orientation in a hot climate. [14M]

UNIT-IV

7. a) Can you recall two passive cooling techniques commonly used in architecture? [7M]  
b) What are the key differences between skylights and traditional windows in architectural design? [7M]

(OR)

8. How does rainwater harvesting aid in mitigating water scarcity in urban areas? [14M]

**UNIT-V**

9. What are the different Green Rating Systems and outline their [14M] distinct focuses.

(OR)

10. What is the impact of energy-efficient building designs on reducing [14M] carbon emissions and their contribution to environmental conservation?

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