**CV6067**

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# **M S RAMAIAH INSTITUTE OF TECHNOLOGY**

(AUTONOMOUS INSTITUTE, AFFILIATED TO VTU)

BANGALORE – 560 054

## **SEMESTER END EXAMINATIONS – MAY / JUNE 2014**

Course & Branch : **B.E.- Civil Engineering**

Semester : **VI**

Subject : **Green Building Technology**

Max. Marks : **100**

Subject Code : **CV6067**

Duration : **3 Hrs**

### **Instructions to the Candidates:**

- Answer one full question from each unit.
- Make relevant assumptions wherever necessary.

### **UNIT – I**

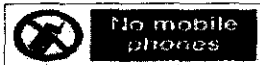
1. a. Explain the need for Green Building. Discuss about the Impact of building industry on energy resources. (10)
  - b. Elaborate on principles of Green Building. Discuss the issues while selecting material and design for longevity. (10)
2. a. Discuss about Life cycle analysis for building and Building material. Write an explanatory note on designing for Longevity. (10)
  - b. Discuss about the possible green alternatives to mortar, plastering and roofing. (10)

### **UNIT- II**

3. a. Distinguish between the advantages and disadvantages of conventional materials and low energy materials. (10)
  - b. Write short notes on (i) Smart materials (ii) Low energy construction (10)
4. a. Discuss the possible alternatives for concrete and metals used in construction (10)
  - b. Write a note on locally sourced material and recycled material. (10)

### **UNIT-III**

5. a. Explain the salient features of sustainable siting of building and Orientation of Building. (10)
  - b. Elaborate on the Solar passive techniques of heating and cooling in a building design with a schematic diagram (10)
6. a. Write short notes on (i)Methods of minimizing load on conventional systems (10)  
(ii)Fenestration and shading
  - b. How best we can use natural components to our advantage in green building design? Discuss with examples (10)

**UNIT- IV**

7. a. Explain the techniques of thermal insulation of roof and walls (10)  
b. What is energy auditing of buildings? Write a note on GRIHA (10)
8. a. Write an explanatory note on LEED Certification systems of Buildings (10)  
b. Write short notes on (i) Thermal insulation for roofs and walls (ii) efficient HVAC systems (10)

**UNIT- V**

9. a. Discuss different water efficient fixtures used to conserve water consumption in buildings (10)  
b. Write an explanatory note on Vertical farming and Xeriscaping (10)
10. a. Write short notes on (i) Rain water Harvesting (ii) Grey water Recycling (10)  
b. Write short notes on (i) Onsite treatment (ii) Methods of reducing irrigation water requirement (10)

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