CVPE667

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M S RAMAIAH INSTITUTE OF TECHNOLOGY

(AUTONOMOUS INSTITUTE, AFFILIATED TO VTU)

BANGALORE – 560 054

SEMESTER END EXAMINATIONS – JUNE 2015

Course & Branch	:	**B.E : Civil Engineering**	**Semester**	:	**VI**
Subject	:	**Green Building Technology**	**Max. Marks**	:	**100**
Subject Code	:	**CVPE667**	**Duration**	:	**3 Hrs**

Instructions to the Candidates:

- Answer one full question from each unit.

UNIT – I

1. a) The future buildings constructed will be essentially green buildings. Justify the statement. (10)

   b) List out the different considerations for selecting materials for construction and explain the importance of designing the building for longevity. (10)

2. a) Define green building. Discuss the different principles of green building? (10)

   b) Discuss embodied energy of building materials and explain the different stages at which the embodied energy is calculated. (10)

UNIT – II

3. a) Discuss alternatives to conventional Reinforced Cement Concrete. Discuss the suitability of recycled aggregates in concrete. (10)

   b) Discuss how smart materials and smart technologies can be applied to building constrction. (10)

4. a) Discuss GEMBA KAIZEN as a management tool for low energy construction. (10)

   b) Discuss the way in which material is selected for construction based on its energy. (10)

UNIT – III

5. a) Discuss the methods of using natural light and ventilation in the building. (10)

   b) How the water bodies and landscaping helps in keeping the building comfortable in hot climates. (10)

6. a) Discuss the principle of sustainable siting of building With relevant examples. (10)

   b) List the different passive techniques that can be adopted in hot and dry climates? (10)

UNIT – IV

7. a) Discuss the different insulating methods that can be adopted in the building with respect to its insulating property and effects. (10)

   b) How energy usage can be minimized by using efficient lighting systems and sensors. (10)

8. a) How the building can be made energy efficient by adopting efficient HVAC systems. (10)

   b) Write a note on different green building evaluating systems used in India. (10)

UNIT – V

9. a) How the water can be saved using different water efficient fixtures. (10)

   b) Write a note on grey water treatment and its reuse. (10)

10. a) Write a note on solar water heater and solar cookers with sketches. (10)

    b) Demonstrate the harvested rain water can be used in the building effectively. (10)