

[5154]-30-A

B.E. (Civil Engg.)

GREEN BUILDING TECHNOLOGY

(2008 Course)(Semester-II) (Elective-IV) (Open Elective)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) Answer any 3 questions from Section I and Section II.
- 2) Figures to the right side indicate full marks.
- 3) Your answers will be valued as a whole.
- 4) Assume suitable data, if necessary.

SECTION-I

- Q1)** a) Explain and discuss sustainable site selection criteria. [7]
b) Discuss the uses of following [3+3+3]
i) Building layout plan
ii) Solar Energy
iii) Fresnel Lens

OR

- Q2)** a) Differentiate between direct and indirect lighting. [6]
b) What is solar concentrator? Discuss. [5]
c) Why the ventilation is necessary? Explain how natural ventilation utilized. [6]

- Q3)** a) Compare the active and passive architecture. [6]
b) Explain the concept of Embodied Energy. [5]
c) Give the selection criteria for material of surface treatment. [6]

OR

- Q4)** a) Explain hybrid system of active and passive refrigeration and air conditioning. [8]
b) Explain the Energy audit of building in detail. [8]

- Q5)** a) Discuss the Green rating of Building. [8]
b) What you understand by environmental clearance of buildings? Discuss. [8]

OR

- Q6)** a) Discuss the improvement for thermal comfort. [6]
 b) Discuss the followings. [6+5]
 i) LEED Criteria & its application
 ii) Carbon credit.

SECTION-II

- Q7)** a) Explain water efficient landscaping. [6]
 b) Explain any one method with suitable sketch for bore well recharging. [6]
 c) Discuss the minimization of water use. [5]

OR

- Q8)** a) Give the note on following [3+4+4]
 i) Smart water taps
 ii) Anaerobic filters
 iii) Ion exchanger
 b) Discuss about advanced biogas plant. [5]

- Q9)** a) Explain what is indoor environmental quality. [8]
 b) Discuss how the quality of indoor environment is maintained? [8]

OR

- Q10)** a) Differential the following.
 i) Adhesives and Sealants ii) Paints and Coatings [4+3]
 b) Discuss the uses of following. [4+3+3]
 i) Composite Wood
 ii) Bamboo
 iii) Jute

- Q11)** a) How the recycling of building materials is beneficial? Discuss. [8]
 b) Discuss the Life cycle analysis in brief. [8]

OR

- Q12)** a) Explain the following. [4+3+3]
 i) Operation Phase
 ii) Construction Phase
 iii) Use of Foudry sand
 b) Explain in details about Construction waste management. [7]

