

Total No. of Questions : 12]

SEAT No. :

[Total No. of Pages :3

**P3683**

**[4759] - 30A**

**B.E. (Civil)**

**GREEN BUILDING TECHNOLOGY**  
**(2008 Course) (Semester - II) (Open Elective)**

*Time : 3 Hours]*

*[Max. Marks : 100*

*Instructions to the candidates:*

- 1) Answer any three questions from section I and Section II.*
- 2) Figures to the right 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. **[4]**

**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

**P.T.O.**

**Q4)** a) Explain hybrid system of active and passive refrigeration and air conditioning. [9]

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. [9]

OR

**Q6)** a) Discuss the improvement for thermal comfort. [6]

b) Give note on followings [4+3+4]

i) LEED Criteria

ii) USGBS

iii) 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. [6]

- Q9)** a) Explain what is indoor environmental quality. [8]  
b) Discuss how the quality of indoor environment is maintained? [9]

OR

- Q10)** a) Differential the following. [4+3]  
i) Adhesives and Sealants  
ii) Paints and Coatings  
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. [3+3+3]  
i) Operation Phase  
ii) Construction Phase  
iii) Use of Foudry sand  
b) Explain in details about Construction waste management. [7]

