

Total No. of Questions : 12]

SEAT No. :

P1058

[Total No. of Pages : 3

[4659]-31

B.E. (Civil Engineering)

h-GREEN BUILDING TECHNOLOGY

(2008 Pattern) (Open Elective-IV)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates:

- 1) *Answers to the two sections should be written in separate answer-books.*
- 2) *Your answer will be valued as a whole.*
- 3) *Neat diagrams must be drawn wherever necessary.*
- 4) *Use of logarithmic tables, slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.*
- 5) *Assume suitable data if necessary.*
- 6) *Answer any three questions from Section-I and any three questions from Section-II.*

SECTION-I

- Q1)** a) Discuss site selection and explain building envelop. [7]
- b) Discuss about natural ventilation with suitable example. How it is effectively utilize. [5]
- c) Give note on Fresnel Lens and Fiber optic. [5]

OR

- Q2)** a) Discuss direct and indirect lighting. [8]
- b) How you can use solar energy? Explain with suitable example. [9]

- Q3)** a) Explain hybrid system of active and passive refrigeration. [8]
- b) What is passive and active architecture? Discuss. [9]

OR

- Q4)** a) Discuss the procedure for the Energy audit of building. [8]
- b) What are the selection criteria of material for thermal comfort? Explain. [9]

P.T.O.

- Q5)** a) What is environmental clearance of building? Explain. [8]
b) Give explanatory note on Green building and Rating of building. [8]

OR

- Q6)** Explain the followings: [16]
a) LEED criteria.
b) USGBC.
c) CDM.
d) Carbon Trading.

SECTION-II

- Q7)** a) What the ways to minimize the water use? Explain about smart controllers. [8]
b) What is water recharge? What are the methods available for the recharge of water sources? Explain in details. [9]

OR

- Q8)** a) Explain with suitable example and sketch: [9]
i) Anaerobic filter.
ii) Reverse Osmosis.
iii) Ion Exchanger.
b) How treated wastewater is useful for non-potable purpose? Explain with suitable example. [8]

- Q9)** a) Discuss the importance of Indoor Environmental Quality. [8]
b) Explain VOC Emitting materials and their uses in green building. [9]

OR

- Q10)a)** Discuss followings: **[9]**
- i) Composite Wood.
 - ii) Carpet System.
 - iii) Agro Fiber.
- b) Discuss and give your comment on the interiors of Green buildings. **[8]**

- Q11)a)** Discuss in the importance of interior of non-structural elements. **[8]**
- b) What is recycling of material? Why it is important? **[8]**

OR

- Q12)a)** How the life cycle analysis is important? Explain. **[8]**
- b) Discuss the impacts of construction activities on the Environment. **[8]**

