

SIXTH SEMESTER DIPLOMA EXAMINATION IN ARCHITECTURE —
MARCH, 2015

SUSTAINABLE ARCHITECTURE

[Time : 3 hours

(Maximum marks : 100)

Marks

PART—A

(Maximum marks : 10)

I Answer the following questions in one or two sentences. Each question carries 2 marks.

1. What is earth sheltering ?
2. Define CASBEE.
3. Define sustainable development.
4. What type of current generated by photo-voltaic cells ?
5. Name any four cost effective building materials.

(5x2=10)

PART—B

(Maximum marks : 30)

II Answer *any five* of the following questions. Each question carries 6 marks.

1. Write down the Indian rating Certification Levels for Sustainability.
2. With the help of sketches explain the components and working principles of photo-voltaic system.
3. Explain construction and demolition recycling.
4. Describe the Energy Efficiency in sustainable architecture.
5. Write any one case study for sustainable development.
6. Write short note on vernacular design.
7. Explain sustainable design.

(5x6=30)

PART—C

(Maximum marks : 60)

(Answer *one* full question from each unit. Each full question carries 15 marks.)

UNIT – I

- III (a) Write briefly on primary rating systems in India. 7
 (b) Define bioregionalism and its perspective. 8

OR

- IV (a) List the general principles of energy conservation. 6
 (b) What makes a building “green”? 7
 (c) What is LEED (US) rating system? 2

UNIT – II

- V (a) What are the phases of development in building? 6
 (b) Write down the principles of design. Explain briefly. 9

OR

- ~~VI (a) Explain briefly various sustainable approaches to site planning. 6~~
 (b) Explain any nine environmental monitoring implications. 9

UNIT – III

- VII What are the various methods and principles that can be used in construction to reduce the energy efficiency in building? Explain with neat sketches. 15

OR

- VIII (a) What are the techniques adopted in sustainable construction? 8
 (b) Explain the solar water heaters. 7

UNIT – IV

- IX (a) Discuss the waste prevention strategies in general. 8
 (b) What are the benefits of recycling? 7

OR

- X Explain how recycle and reuse in various building stages of a project helps to attain sustainability in architectural project. 15