

Unit IV

No. of Printed Pages : 04

Roll No.

7. Discuss the construction of any *one* of the following organizations in developing and promoting sustainable materials and architecture by quoting suitable examples :
 - (a) Development Alternatives
 - (b) Auroville.
8. Write short notes on the contribution of the Govt. Organizations/NGO's on the following :
 - (a) Developing Modular systems for walling
 - (b) Development and promotion of Bamboo based technologies.

BB-263

M. Arch. EXAMINATION, Dec. 2017

(Second Semester)

(Re-appear Only)

SUSTAINABLE ARCHITECTURE

MARC-608

Sustainable and Innovative Materials

Time : 3 Hours]

[Maximum Marks : 75

Before answering the question-paper candidates should ensure that they have been supplied to correct and complete question-paper. No complaint, in this regard, will be entertained after the examination.

Note : Attempt *Five* questions in all, selecting at least *one* question from each Unit. All questions carry equal marks.

Unit I

1. Write short notes on any *three* of the following in context to building materials :
 - (a) Role and importance of Embodied energy
 - (b) Third party certification and environmental impact
 - (c) Social and economic impacts
 - (d) Reclamation and waste prevention.
2. What do you understand by Sustainable Building Materials ? Is there any standard definition for them ? Can construction waste be turned into sustainable material ? List down various advantages of using sustainable materials with examples.

Unit II

3. Archaeological evidence shows that Lime has been used in building techniques for over 5,000 years. What are those properties which make lime an all-time favorite materials ? Also discuss its various forms and applications.

4. “Genuine and natural stone products inherently have some environmentally-preferable characteristics.” With the help of suitable examples highlight these positive attributes of stone and its application as a green building product.

Unit III

5. Write short notes on any *three* of the following highlighting their applications and advantages for sustainable buildings :
 - (a) Fabric and digital technologies
 - (b) Industrial by-products in cement and concrete
 - (c) Light gauge steel framed structures
 - (d) Precast reinforced concrete flooring/roofing system.
6. Discuss in detail the common plastics and their classification. Mostly plastic is considered as environment pollutant, hence justify the application of plastics and polymers as sustainable materials for construction.