

**M. Arch. Sem-I (Sustainable Architecture) (2014 Course) (CBCS) :
SUMMER - 2019**

SUBJECT-SUSTAINABLE MATERIALS AND TECHNOLOGY

Day: Thursday
Date: 09/05/2019

S-2019-3738

Time: 10.00 A.M. TO 12.00 NOON
Max. Marks: 60

N.B.:

- 1) Solve any **THREE** questions from each section.
- 2) Figures to the right indicate **FULL** marks.
- 3) Answers to both the sections should be written in **SEPARATE** answer book.

SECTION-I

- Q.1** Define the following: **(10)**
- a) Renewable Materials
 - b) What are Sustainable Materials?
 - c) Embodied Energy
 - d) Strength of Bamboo
 - e) Cob Wall
- Q.2** Describe the following: **(10)**
- a) Any two traditional materials as thermal insulation
 - b) Wattle & Daub
- Q.3** Write short notes on: **(10)**
- a) Health Impacts of building materials
 - b) Straw bale as building material
- Q.4** What is LCA? & explain LCA for any traditional material **(10)**
- Q.5** Explain why bamboo is an alternative material **(10)**

SECTION-II

- Q.6** Define the following: **(10)**
- a) ACC blocks
 - b) Use of Gypsum in Construction
 - c) Plywood in construction
 - d) Green Wall
 - e) Insulation in walling
- Q.7** Describe the following: **(10)**
- a) Cavity wall as a sustainable technology
 - b) Energy efficient windows
- Q.8** Write short notes on: **(10)**
- a) Teflon sheets
 - b) Advantages of contemporary over traditional materials
- Q.9** Explain why Steel is a sustainable material **(10)**
- Q.10** LCA of Phase Change Materials **(10)**

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