

**M. Arch. Sem-I (Sustainable Architecture) (CBCS 2018 Course) :**

**SUMMER - 2019**

**SUBJECT: SUSTAINABLE MATERIALS & TECHNOLOGY**

Day: Thursday  
Date: 09/05/2019

**S-2019-3747**

Time: 2:00 P.M. TO 4:00 P.M.  
Max Marks. 60

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**N.B.**

- 1) All questions are **COMPULSORY**.
  - 2) Both the sections should be written in **SEPARATE** answer books.
  - 3) Figures to the right indicate **FULL** marks.
  - 4) Assume suitable data and draw figures if necessary.
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**SECTION - I**

- Q.1** Write short notes on any **TWO** of the following: **(10)**
- a) What are sustainable materials?
  - b) Explain ACC blocks in detail.
  - c) Explain green wall construction in detail.
- Q.2** Explain in brief/describe the following terms in detail (**Any TWO**) **(10)**
- a) What is LCA and LCCA?
  - b) Write in brief about PVC as a construction material.
  - c) Explain need for recycling of building materials.
- Q.3** Answer the following (**Any ONE**) **(10)**
- a) Use of adobe in building construction and its thermal properties with sketches.
  - b) Explain coir boards in detail.

**SECTION - II**

- Q.4** Write short notes on any **TWO** of the following: **(10)**
- a) Glass as a sustainable materials.
  - b) Write in detail about limestone and lime plastering.
  - c) What are Eco link boards? Write about its LCA.
- Q.5** Explain in brief/describe the following terms in detail (**Any TWO**) **(10)**
- a) Explain trombe wall.
  - b) Flyash as an alternative material.
  - c) Explain bamboo as a material.
- Q.6** Answer the following (**Any ONE**) **(10)**
- a) Use of timber as a construction material and why it is sustainable.
  - b) Explain five different types of stone, its use in different climates according to its properties, along with LCA of one of the example.

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