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18CV643

**Sixth Semester B.E. Degree Examination, June/July 2024**  
**Alternate Building Materials**

Time: 3 hrs.

Max. Marks: 100

*Note: Answer any FIVE full questions, choosing ONE full question from each module.*

**Module-1**

- 1 a. Explain the environmental issues related to building materials. (10 Marks)
- b. With neat sketch, explain rain water harvesting enlisting its various advantages. (10 Marks)

**OR**

- 2 a. Write a note on Green building ratings. (06 Marks)
- b. Discuss buildings in different climatic regions. (06 Marks)
- c. Write short notes on:
  - i) Roof Pond System
  - ii) Direct gain passive solar system. (08 Marks)

**Module-2**

- 3 a. Explain the method of manufacturing the stabilized mud blocks. (10 Marks)
- b. Explain briefly the use of stones and laterite blocks as masonry units. (10 Marks)

**OR**

- 4 a. List out the factors influencing compressive strength of masonry. Explain any two. (10 Marks)
- b. Write short notes on:
  - i) FAL-G blocks
  - ii) Characteristics of a good brick. (10 Marks)

**Module-3**

- 5 a. What is lime-pozzolana cement? Explain the different ways of blending lime and pozzolana. (10 Marks)
- b. List out matrix materials and reinforcing materials in fiber reinforced cement composites and explain their behavior of FRC in compression. (10 Marks)

**OR**

- 6 a. Explain typical agro wastes and other biomass resources in construction. (10 Marks)
- b. Discuss the following:
  - i) Application of FRC in construction.
  - ii) Production of Rice husk ash in rice husk burner. (10 Marks)

**Module-4**

- 7 a. Explain various types of filler slabs along with materials. (10 Marks)
- b. Explain masonry vaults and domes. (10 Marks)

OR

- 8 a. Explain the materials used in production of ferro cement products. (10 Marks)  
b. Discuss the following in brief:  
i) Cavity wall  
ii) Rammed Earth. (10 Marks)

**Module-5**

- 9 a. Explain the methods involved in production of precast elements. (10 Marks)  
b. Discuss in brief cost saving techniques in construction. (10 Marks)

OR

- 10 a. Write a note on global warming and construction industries. (10 Marks)  
b. Explain the machine used in making of stabilized mud block. (10 Marks)

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