

# CBCS SCHEME

USN

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15CT753

Seventh Semester B.E. Degree Examination, Dec.2018/Jan.2019

## Alternate Building Materials and Technology

Time: 3 hrs.

Max. Marks: 80

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

### Module-1

- 1 a. Discuss the environmental issues related to building materials. (08 Marks)  
b. Explain the influence of density and cement content on block strength. (08 Marks)

OR

- 2 a. Discuss energy in building materials and buildings. (08 Marks)  
b. Explain in detail mentioning the right choice and proportion of ingredients required in the manufacture of Stabilized Mud Blocks (SMD). (08 Marks)

### Module-2

- 3 a. Explain how Pozzolana material can be produced by powdered burnt clay and flyash. (08 Marks)  
b. Write a note on various materials used in the production of fibre reinforced concrete composites. (08 Marks)

OR

- 4 a. Explain the behaviour of fibre reinforced concrete under compression. (10 Marks)  
b. Explain the various industrial and mine wastes that can be used in the production of concrete. (06 Marks)

### Module-3

- 5 a. Explain the terms ferro cement and ferro concrete. Discuss in detail the various types of meshes used in ferro cement subjected to tension, with the help of diagram. (08 Marks)  
b. Write a note on alternatives for wall construction. (08 Marks)

OR

- 6 a. Explain in detail the cementations materials of masonry mortars and types of mortars based on their constitutive materials. (08 Marks)  
b. Explain the behaviour of ferro cement element under tension. (08 Marks)

### Module-4

- 7 a. What is a Cool roof system? Explain the benefits of cool roof system in buildings. (08 Marks)  
b. Discuss the material selection criteria for a filter slab. (08 Marks)

OR

- 8 a. Explain the need for alternative roofing system. (08 Marks)  
b. Explain the construction of composite beam panel roofs. (08 Marks)

### Module-5

- 9 a. What is cost concept in building? Indicate its importance. (08 Marks)  
b. Explain the machine used for production of Stabilized Mud Blocks. (08 Marks)

OR

- 10 a. What is the cost effective building design? Explain the cost of saving techniques in design and construction. (08 Marks)  
b. Explain the machines used for the manufacture of stabilized blocks. (08 Marks)

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Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.  
2. Any revealing of identification, appeal to evaluator and/or equations written eg, 42+8 = 50, will be treated as malpractice.