



CBCS SCHEME

18CV643

Sixth Semester B.E. Degree Examination, Dec.2024/Jan.2025 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 concept of energy embodied in building materials and buildings. (08 Marks)
- b. Explain the role of construction industry in global warming. (07 Marks)
- c. Explain the need for alternative building materials. (05 Marks)

OR

- 2 a. What are the commonly used environmental friendly and cost effective building technologies? Explain. (08 Marks)
- b. Explain rain water harvesting in building. (06 Marks)
- c. Discuss the buildings in different climatic conditions. (06 Marks)

Module-2

- 3 a. Write a note on:
i) Fal G blocks
ii) Laterite blocks. (10 Marks)
- b. List and explain properties of Good Mortar. (10 Marks)

OR

- 4 a. Explain the method of manufacturing stabilized mud block. (10 Marks)
- b. A brick masonry prism is made up of 6 brick's joined by mortar of thickness 2cm the brick is 8cm in thickness. The prism is subjected to a uniform vertical stress of 5MPa. The brick has a modulus of 800MPa and the mortar has a modulus of 900MPa. Determine the horizontal lateral stress in brick and mortar. Assume the Poisson's ratio of brick and mortar = 0.1. (10 Marks)

Module-3

- 5 a. Name different types of Pozzolona material. Explain any two in detail. (10 Marks)
- b. Write a note on : i) Metallic fiber ii) Natural fiber. (10 Marks)

OR

- 6 a. List the agro wastes and mention it application in the building construction. (10 Marks)
- b. What are different industrial wastes used effectively in construction industry. Explain any 3 materials. (10 Marks)

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.

Module-4

- 7 a. Explain any two alternatives for wall construction with neat sketches. (10 Marks)
- b. What is meant by ferrocement? List the materials used for ferrocement. Mention the applications of ferrocement. (10 Marks)

OR

- 8 a. Explain the :
i) Composite beam and panel roofs
ii) Filler slab roofs. (10 Marks)
- b. List the advantages and disadvantages of Mivan construction techniques explain. (10 Marks)

Module-5

- 9 a. What are the advantages and disadvantages of manufacturing concrete term R.M.C plants. (10 Marks)
- b. What is the meaning of precast elements? What are the advantages of precast concrete? (10 Marks)

OR

- 10 a. Write a note on :
i) Types of concrete mixers
ii) Cast concept in building. (10 Marks)
- b. What are the equipments used for producing stabilized blocks? Explain them in brief. (10 Marks)
