



# CBGS SCHEME

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18ARC82

## Eighth Semester B.Arch. Degree Examination, Dec.2025/Jan.2026 **Materials and Methods in Building Construction - VIII**

Time: 4 hrs.

Max. Marks: 100

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

### Module-1

1 Elaborate on the following innovations in construction industry :  
a. Modular construction (05 Marks)  
b. Prefabrication (05 Marks)  
c. Under water construction (05 Marks)  
d. Under ground construction. (05 Marks)

**OR**

2 Enlist four special and light weight materials and explain the characteristic features and application of two materials. (20 Marks)

### Module-2

3 What is Big Data? Explain the five "V's" of Big Data and the benefits of Big Data in construction industry. (20 Marks)

**OR**

4 What is Simulation? Explain the process of simulation study with an example. (20 Marks)

### Module-3

5 Introduce to embodied energy in a material. Elaborate the purpose of life cycle assessment of buildings and the issues in life cycle assessment of a building. (20 Marks)

**OR**

6 Write short notes on the following :  
a. Retrofitting (05 Marks)  
b. Renovation (05 Marks)  
c. Condition Assessment of a building (05 Marks)  
d. Repair. (05 Marks)

### Module-4

7 Differentiate between Green buildings and Zero energy buildings in terms of materials, technology and performance. (20 Marks)

**OR**

8 Explore the impact of the following towards sustainable built environment :  
a. LEED (10 Marks)  
b. TERI. (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-5**

9 Enlist five smart materials in building construction. Introduce to the concept of smart materials with two examples. (20 Marks)

**OR**

10 What is Nano Technology? Narrate how nano technology in building materials can impact building industry with two examples. (20 Marks)

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