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## Eighth Semester B.Arch. Degree Examination, July/August 2022 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 a. Explain issues involved in building underground. (10 Marks)  
b. Give any four innovations in construction industry. (10 Marks)

**OR**

- 2 a. Explain any five innovative concretes used in construction. (10 Marks)  
b. Enumerate any four formwork technologies available for high rise buildings. (10 Marks)

### Module-2

- 3 a. Explain the importance of BIG DATA in construction industry. (10 Marks)  
b. How has 3D printing influenced constructions? (10 Marks)

**OR**

- 4 a. Describe any four construction equipment used for heavy constructions. (10 Marks)  
b. How is Internet Of Things (IOT) used in construction projects? (10 Marks)

### Module-3

- 5 a. Explain reasons why buildings one damaged. (10 Marks)  
b. Explain retrofitting of buildings. (10 Marks)

**OR**

- 6 a. Explain life cycle analysis and life cycle cost analysis. (10 Marks)  
b. What are common repairs done to buildings? (10 Marks)

### Module-4

- 7 a. What are the benefits of green buildings? (10 Marks)  
b. What are the design parameters of green buildings? (10 Marks)

**OR**

- 8 a. Explain the criteria behind green building rating system for new buildings in Indian building context, using either GRIHA or IGBC standards. (10 Marks)  
b. What is net zero energy building? How is it designed? (10 Marks)

### Module-5

- 9 What is Nano Technology? What are some nano materials used in the construction industry? (20 Marks)

**OR**

- 10 What are smart materials? Explain their use in construction industry with examples. (20 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.