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## Eighth Semester B. Arch Degree Examination, June/July 2019 Material and Methods in Building Construction VIII

Time: 4 hrs.

Max. Marks: 100

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

### Module-1

- 1 a. Define modular construction and explain its features. Detail out its components with suitable sketches. (10 Marks)
- b. Elaborate on Mivan Aluminium framwrok with suitable sketches. (10 Marks)

OR

- 2 Discuss the different types of curtain walls as a kind of enclosure system with suitable sketches. (20 Marks)

### Module-2

- 3 Answer the following :
  - a. What is 3D printing and how does it work? (05 Marks)
  - b. Explain any 2 types of 3D printing technologies. (10 Marks)
  - c. List out atleast 3 modern construction equipments that facilities speedy construction. (05 Marks)

OR

- 4 What is BIM? Elaborate on the use of BIM in construction management. (20 Marks)

### Module-3

- 5 Discuss in detail any four methods of building crack repair techniques. (20 Marks)

OR

- 6 a. Explain any five typical damages found in buildings. (10 Marks)
- b. What is a building retrofit? Elaborate with a case study. (10 Marks)

### Module-4

- 7 a. What is LEED? How does it contribute to sustainable development? Explain the rating system and main credit categories. (10 Marks)
- b. Discuss a zero energy building with neat sketches. (10 Marks)

OR

- 8 a. What is the concept of Net zero energy building? what are the technique through which zero energy for a building can be obtained? (10 Marks)
- b. Elaborate a case study of a LEED-rated building with suitable sketches. (10 Marks)

### Module-5

- 9 Explain the properties of any five smart materials and its applications in the construction industry. (20 Marks)

OR

- 10 Discuss any four Nano-materials and its application in the construction Industry. (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.