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Eighth Semester B.Arch. Degree Examination, Dec.2023/Jan.2024 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 any four environmental and any four structural factors of enclosure systems of multi-storeyed buildings. (10 Marks)
b. Explain any two types of formwork used for construction of high rise buildings. (10 Marks)

OR

- 2 a. Explain any four types of innovative concretes used in the construction industry. (10 Marks)
b. Explain the construction methods of underground buildings. (10 Marks)

Module-2

- 3 a. Give four benefits of using internet of things in construction. (10 Marks)
b. What are the advantages of robotics in the construction industries? (10 Marks)

OR

- 4 a. Explain any two advancements in construction equipment. (10 Marks)
b. How can data analytics optimize construction of large projects? (10 Marks)

Module-3

- 5 a. What are causes of cracks in buildings? (10 Marks)
b. Explain structural retrofitting of RCC buildings. (10 Marks)

OR

- 6 a. Explain life cycle analysis and life cycle cost analysis with a suitable example. (10 Marks)
b. Explain any four causes of damage to buildings. (10 Marks)

Module-4

- 7 a. What is a green building rating system? Explain IGBC and GRIHA briefly? (10 Marks)
b. Explain any four passive design strategies for a building in the tropics. (10 Marks)

OR

- 8 a. Explain any four important reasons why a green building scores over a conventionally designed building. (10 Marks)
b. How can you achieve net zero energy for an office building? (10 Marks)

Module-5

- 9 What does nano technology mean? What are four examples of nano materials used in construction? (20 Marks)

OR

- 10 How is smart material defined? Explain the use of any four smart materials. (20 Marks)
