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15ARC82

Eighth Semester B.Arch. Degree Examination, July/August 2021 Materials and Methods in Building Construction - VIII

Time: 4 hrs.

Max. Marks: 100

Note: Answer any FIVE full questions.

- 1 a. Write a short note on any two recent innovations in the construction industry. (10 Marks)
b. Elaborate on the types of underwater construction techniques. (10 Marks)
- 2 a. Explain in detail stick built and unitised systems, mentioning its advantages and disadvantages. (10 Marks)
b. Mention any 5 ways plastics can be used in the construction industry with illustrative sketches. (10 Marks)
- 3 Elaborate on :
i) any two methods adopted in 3D Printing (10 Marks)
ii) any four new advances in construction equipment (10 Marks)
- 4 Elaborate on the use of BIM in construction management. (20 Marks)
- 5 Explain the building lifecycle stages and their related environment impacts. (20 Marks)
- 6 a. With the help of a case study explain how a building has been retrofitted. What were the criteria to retrofit that building? (10 Marks)
b. Elaborate on crack repair technique, explaining in detail any four methods of crack repair. (10 Marks)
- 7 How does LEED contribute to sustainability, explain with a case study. (20 Marks)
- 8 Explain method of harvesting and conserving energy to achieve a net zero energy building with the help of a case study. (20 Marks)
- 9 Define smart materials and enlist their salient characteristics, Identify minimum two smart construction materials and explain their applications. (20 Marks)
- 10 What are nano materials? explain new opportunities offered by nano materials in construction industry. Explain briefly any four nano building materials. (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.