

CBCS SCHEME

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18CV822

Eighth Semester B.E. Degree Examination, June/July 2023 Prefabricated Structures

Time: 3 hrs.

Max. Marks: 100

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

Module-1

- 1 a. Explain the concept of low cost housing by using the example of prefabricated structural elements. (10 Marks)
- b. List the advantages and disadvantages of prefabricated construction. (10 Marks)

OR

- 2 a. Explain with neat diagram of modular grid and types of modular coordination. (10 Marks)
- b. Write short notes on:
 - (i) Transportation
 - (ii) Production of prefabrication (10 Marks)

Module-2

- 3 a. Explain the behaviour of structural components of prefabricated elements in building design. (10 Marks)
- b. Write short notes on:
 - (i) Shear walls
 - (ii) Wall panels (10 Marks)

OR

- 4 a. Explain briefly large panel constructions and types. (10 Marks)
- b. Why the necessity of providing shear walls in precast structures and discuss the types of shear walls. (10 Marks)

Module-3

- 5 a. Explain briefly disuniting of structures with neat sketches and write advantage and disadvantages of disuniting structures. (10 Marks)
- b. Explain briefly Fretted Latticed and Vierendeel structures in prefabrication with neat sketches. (10 Marks)

OR

- 6 a. Design the cross section based on efficiency of materials used in prefabricated structures. (10 Marks)
- b. Explain briefly the problems involved in design in joint flexibility. (10 Marks)

Module-4

- 7 a. Explain briefly structural connections in precast buildings. (10 Marks)
b. Explain briefly the design of expansion joint in precast buildings. (10 Marks)

OR

- 8 a. Explain briefly the codal provisions to be adopted in dimensions and detailing of prefabrication. (10 Marks)
b. Discuss briefly different connections made in prefabricated structures. (10 Marks)

Module-5

- 9 a. Discuss briefly codes and standards for progressive collapse. (10 Marks)
b. Write short notes on:
(i) Cyclone
(ii) Structural Integrity (10 Marks)

OR

- 10 a. Explain briefly design criteria for progressive collapse in abnormal loads. (10 Marks)
b. Explain briefly the special requirements for buildings in high seismic zones. (10 Marks)
