

CBCS SCHEME

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15CV752

Seventh Semester B.E. Degree Examination, Dec.2018/Jan.2019

Prefabricated Structures

Time: 3 hrs.

Max. Marks: 80

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

Module-1

- 1 a. What are the advantages and disadvantages of prefabricated construction? (06 Marks)
b. What is standardization? What are the factors influencing standardization? (06 Marks)
c. Write a short note on erection of prefabricated structures. (04 Marks)

OR

- 2 a. What is the need of prefabrications and principles involved in prefabrication technique? (06 Marks)
b. What is system? Explain stand, conveyor belt and aggregate system of production of prefabrication structure. (06 Marks)
c. Write a short note on transportation of prefabricated structures. (04 Marks)

Module-2

- 3 a. Explain merits and demerits of large panel construction. (06 Marks)
b. Explain any two different types of shear wall and forces acting on shear wall with neat sketch. (06 Marks)
c. Write a note on behavior of column in prefabricated structure. (04 Marks)

OR

- 4 a. Explain any three types and behavior of roof slabs construction with suitable sketches. (06 Marks)
b. Explain any three type and behavior of large panel construction with suitable sketches. (06 Marks)
c. Write a short note on prefabricated wall panel. (04 Marks)

Module-3

- 5 a. Write the detail about design of cross-section based on efficiency of materials. (06 Marks)
b. Why should we give allowance for joint deformation? Explain in detail. (06 Marks)
c. Write a short note on disuniting of structures. (04 Marks)

OR

- 6 a. What are the advantages and disadvantages of disuniting of structures? (06 Marks)
b. Explain the problems involved in design because of joint flexibility. (06 Marks)
c. What are dry joints and wet joints? (04 Marks)

Module-4

- 7 a. Explain with neat sketches any three different types of jointing in structures. (06 Marks)
b. Explain design procedure for expansion joints. (06 Marks)
c. What are the essential requirements of joints in precast structures? (04 Marks)

OR

- 8 a. Explain expansion joint and contraction joints. (06 Marks)
b. Explain joint techniques and materials used in detail and explain the design of expansion joint. (06 Marks)
c. Explain about column to column connection with neat sketches. (04 Marks)

Module-5

- 9 a. Define abnormal loads. Explain the causes of progressive collapse. (06 Marks)
b. Explain the methods of avoidance of progressive collapse. (06 Marks)
c. What are the provisions made in prefabricated RC floors in a cyclone prone zone? (04 Marks)

OR

- 10 a. Explain the codal provisions for progressive collapse. (06 Marks)
b. Explain the procedure to calculate equivalent design loads when the structure is subjected to earthquake loading. (06 Marks)
c. What are the requirements to increase the resistance to progressive collapse? (04 Marks)
