

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2015.

Eighth Semester

Civil Engineering

CE 2045/CE 805/CE 1007/080100060/10111 CEE 44 — PREFABRICATED STRUCTURES

(Regulation 2008/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — ($10 \times 2 = 20$ marks)

1. Give the different types of modular grids.
2. List out the limitations of modular coordination in precast elements.
3. What are the loads acting on wall panel members?
4. What is a shear wall?
5. What do you mean by disuniting of structures?
6. Define "Joint Flexibility".
7. Draw a joint connecting wall panel with frame.
8. Write any two characteristics of expansion joints.
9. What is meant by progressive collapse?
10. Differentiate between intensity and magnitude of earthquake.

PART B — ($5 \times 16 = 80$ marks)

11. (a) Explain in detail about different materials used the principle and need of prefabrication.

Or

- (b) What are the different types of structural systems used in prefabricated structures? Explain.

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Or

(b) Describe the manufacturing process of wall panels.

13. (a) Explain in detail about the suitable design of cross section based on efficiency.

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Or

(b) Discuss the salient points considered while designing a joint. Discuss the importance of joint flexibility.

14. (a) Explain in detail :

(i) Beam to column connection. (8)

(ii) Doors and windows to wall connection. (8)

Or

(b) How do you perform the design of expansion joints?

15. (a) Discuss the codal provisions in the design for structures subjected to earthquakes.

Or

(b) Explain a situation for occurrence of progressive collapse. How do you avoid progression collapse?

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