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**Question Paper Code : 21237**

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2015.

Eighth Semester

Civil Engineering

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

(Regulations 2008/2010)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Give the different types of modular grids.
2. List out the limitations of modular coordination in precast elements.
3. What is a shear wall?
4. What are the loads acting on wall panel members?
5. What is disuniting?
6. What are the different design principles in prefabricated construction?
7. State post tensioned connection.
8. Give any four types of joints.
9. What is abnormal load?
10. What is meant by progressive collapse?

PART B — (5 × 16 = 80 marks)

11. (a) Explain in detail about different materials that uses the principle of prefabrication. Also , explain their need.

Or

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

12. (a) With a flow chart explain the manufacturing process of roof and floor slabs.

Or

- (b) Describe the manufacturing process of wall panels.

13. (a) Design principles of disuniting of structures and explain in detail.

Or

- (b) What is joint flexibility and allowance for joint deformation? Explain problems in design.

14. (a) Explain with the aid of neat sketches, any two different structural connection. (16)

Or

- (b) (i) Enumerate detailing of structural connections. (8)  
(ii) How expansion joints are designed? (8)

15. (a) Explain the concept of equivalent design loads for abnormal effects.

Or

- (b) Explain a situation for occurrence of progressive collapse.

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