

119 APR 2023

Reg. No.

Question Paper Code

11776

B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL/MAY 2023

Eighth Semester

Civil Engineering

CE8022 – PREFABRICATED STRUCTURES

(Regulations 2017)

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

- | | <i>Marks,
K-Level, CO</i> |
|--|-------------------------------|
| 1. List out the different types of modular grids. | 2,K1,CO1 |
| 2. What is Standardization? | 2,K1,CO1 |
| 3. Define long wall system. | 2,K1,CO2 |
| 4. What are the types of precast floors? | 2,K1,CO2 |
| 5. Distinguish between concrete wall and shear wall. | 2,K2,CO3 |
| 6. Mention some important requirements of joint flexibility. | 2,K1,CO3 |
| 7. List out the material used for concrete joints. | 2,K1,CO4 |
| 8. List out the functions of joints. | 2,K1,CO4 |
| 9. Define connections. | 2,K1,CO5 |
| 10. What are the different connections made in prefabricated structures? | 2,K1,CO5 |

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) What are the Importance Aspects considered during Erection and Transportation of Precast elements? 13,K2,CO1
- OR**
- b) Explain the two types of prefabrication system in detail. 13,K2,CO1
12. a) Explain the behaviour of large panel construction with suitable sketches. 13,K2,CO2
- OR**
- b) Explain the architectural aspects of shear walls. 13,K2,CO2
13. a) Describe why structural analysis is to be done for precast structures. 13,K2,CO3

K1 – Remember; K2 – Understand; K3 – Apply; K4 – Analyze; K5 – Evaluate; K6 – Create

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OR

b) What is joint flexibility and allowance for joint deformation? Explain problems in detail? *13,K2,CO3*

14. a) What is the importance of joints in precast structures when compared to cast in situ structures? *13,K2,CO4*

OR

b) Explain the merits and demerits of expansion joint in prefabricated structures. *13,K2,CO4*

15. a) Explain in detail the different structural connections in precast buildings. *13,K2,CO5*

OR

b) Explain in detail:
(i) Column to column connection. *6,K2,CO5*
(ii) Column to foundation connection. *7,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Define abnormal loads. Explain the causes of progressive collapse. *15,K2,CO6*

OR

b) Explain the Guidelines for achieving Structural integrity. *15,K2,CO6*