



**B.E/B.TECH DEGREE EXAMINATIONS: NOV/DEC 2023**

(Regulation 2018)

Sixth Semester

**CIVIL ENGINEERING**

U18CEE0002 : Prefabricated Structures

**COURSE OUTCOMES**

- CO1:** Identify the principles and systems of prefabrication in the field.  
**CO2:** Understand the various prefabricated components for specific use.  
**CO3:** Understand the design principles for prefabricated structures.  
**CO4:** Classify the structural connections.  
**CO5:** Understand the various code provisions regarding progressive collapse.

**Time: Three Hours**

**Maximum Marks: 100**

**Answer all the Questions:-**

**PART A (10 x 2 = 20 Marks)**

**(Answer not more than 40 words)**

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|--|-----------------------|
| 1. List out the need for prefabrication.                                   | CO1 [K <sub>1</sub> ] |
| 2. List the types of prefabricated Systems.                                | CO1 [K <sub>2</sub> ] |
| 3. Define waffle slab.   | CO2 [K <sub>1</sub> ] |
| 4. List the type of shear wall according to H/D ratio.                     | CO2 [K <sub>1</sub> ] |
| 5. List the major consideration in the design of precast concrete systems. | CO3 [K <sub>2</sub> ] |
| 6. Define form factor.   | CO3 [K <sub>1</sub> ] |
| 7. Define Expansion joint in the structure.                                | CO4 [K <sub>1</sub> ] |
| 8. What is meant by joint flexibility?                                     | CO4 [K <sub>1</sub> ] |
| 9. Define progressive collapse.  | CO5 [K <sub>1</sub> ] |
| 10. What are the causes of abnormal loads?                                 | CO5 [K <sub>1</sub> ] |

**Answer any FIVE Questions:-**

**PART B (5 x 16 = 80 Marks)**

**(Answer not more than 400 words)**

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|---|-----------------------|
| 11. Discuss in detail about modular coordination and explain the need for prefabrication. | CO1 [K <sub>2</sub> ] |
| 12. Discuss the various types of wall panels in detail with neat sketch.                  | CO2 [K <sub>2</sub> ] |
| 13. Explain the design of cross section of beam based on the efficiency of material used. | CO3 [K <sub>3</sub> ] |

14. Explain joints and problems in joints due to joint flexibility in detail. CO4 [K<sub>2</sub>]
15. Explain in detail the different structural connections in precast buildings with neat sketch. CO4 [K<sub>2</sub>]
16. Explain progressive collapse in detail. CO5 [K<sub>2</sub>]

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