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Question Paper Code	12739
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B.E. / B.Tech. - DEGREE EXAMINATIONS, APRIL / MAY 2024

Sixth Semester

Civil Engineering

20CEEL603 - PREFABRICATED STRUCTURES

Regulations - 2020

Duration: 3 Hours

Max. Marks: 100

PART - A (10 × 2 = 20 Marks)

Answer ALL Questions

	Marks	K- Level	CO
1. Define Modular coordination.	2	K1	CO1
2. Write the advantages of prefabrication.	2	K1	CO1
3. What are the loads acting on wall panels?	2	K1	CO2
4. List out the types of shear wall.	2	K1	CO2
5. Explain briefly the disuniting of structures.	2	K2	CO3
6. Write short notes on joint flexibility.	2	K1	CO3
7. What is the importance of joints in precast structures when compared to cast-in-situ joints?	2	K2	CO4
8. Write the importance of dimensions and detailing.	2	K2	CO5
9. Name any four abnormal loads.	2	K1	CO6
10. What do you mean by progressive collapse?	2	K1	CO6

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11. a) Discuss with neat sketches the different systems of prefabrication. Mention their merits and demerits. 13 K2 CO1
- OR**
- b) Explain briefly the general principles and need of prefabrication in construction sector. 13 K2 CO1
12. a) Enumerate the behaviour of large panel construction with neat sketches. 13 K2 CO2
- OR**
- b) Describe in detail about the behaviour and construction of roof and floor slabs. 13 K2 CO2

13. a) Explain in detail about design of cross section based on efficiency of the materials. 13 K2 CO3

OR

- b) Enumerate how the precast components are handled without cracks during erection. 13 K2 CO3

14. a) Elaborate the guidelines recommended for the design of an expansion joint. 13 K2 CO4

OR

- b) Explain in detail about the various types of joints in precast construction. 13 K2 CO4

15. a) Explain about beam to column connection. 13 K2 CO5

OR

- b) Explain the foundation to column connection and column to beam connection with neat sketches. 13 K2 CO5

PART - C (1× 15 = 15 Marks)

16. a) Elucidate the importance of avoidance of progressive collapse with neat sketches. 15 K2 CO6

OR

- b) Describe the procedure for calculating equivalent design loads when the structure is subjected to earthquake loading. 15 K2 CO6