19 JUN 2023

Reg. No.												

Question Paper Code	11915

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

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 Co-ordination.	2,K1,CO1
2.	What is Standardization?	2,K1,CO1
3.	How are the prefabricated components classified?	2,K2,CO2
4.	State the functions of a shear wall.	2,K2,CO2
5.	Write short notes on joint flexibility.	2,K1,CO3
6.	Define dimensional tolerances.	2,K1,CO3
7.	What are the importances of joints in precast structures when compared to cast- in-situ structures?	2,K1,CO4
8.	What is the need for an expansion joint in Precast structures?	2,K1,CO4
9.	Define connections?	2,K1,CO5
10.	Based on the location within a building, how connections can be classified?	2,K1,CO5

PART - B (5 × 13 = 65 Marks)

Answer ALL Questions

11.	a)	Explain the need for Prefabrication Systems and also mention its advantages and disadvantages.	13,K2,CO1
		OR	
	b)	Discuss the important aspects considered during hoisting, erection and transportation of precast element.	13,K2,CO1
12.	a)	Explain in detail about the large panel construction and state its merits and demerits.	13,K2,CO2
		OR	
	b)	Classify the different types of shear wall. Enumerate the importance and purpose of constructing shear wall in a building.	13,K2,CO2

13. a) Discuss the necessity of disuniting of structures and explain in detail with sketch. *13,K2,CO3*

OR

b) Write in detail about design of cross section based on efficiency of the materials. *13,K2,CO3*

14. a) Explain in detail about the various types of joints in precast construction. *13,K2,CO4*

OR

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

15. a) Discuss in detail with sketches the different types of column to column connections used in framed precast reinforced concrete building. *13,K2,CO5*

OR

b) Explain about column to foundation connection. *13,K2,CO5*

PART - C (1 × 15 = 15 Marks)

16. a) Explain briefly about the different types of progressive collapses which occurs in the multi storey building with neat sketches. *15,K2,CO6*

OR

b) Mention in detail the codal provisions for considering the effect of earthquake and cyclones. *15,K2,CO6*