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**Question Paper Code: U1916**

M.E. DEGREE EXAMINATION, APRIL 2024

Professional Elective

Structural Engineering

21PSE516 – PRECAST AND PREFABRICATED STRUCTURES

(Regulations 2021)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART - A (5 x 20 = 100 Marks)

1. (a) Categorize the various stages in construction of prefabricating structures. CO2- App (20)  
Or  
(b) Elaborate with sketches the cross sections of beams and columns used in precast construction. CO2- App (20)
2. (a) Correlate the requirements of ideal structural joint? Explain different joints? CO4- Ana (20)  
Or  
(b) Integrate the essential requirements of joints in precast construction? CO4- Ana (20)
3. (a) Enumerate the types of joints in precast construction. Also explain its behavior. CO2- App (20)  
Or  
(b) Illustrate the types of joints in precast construction. Also explain its behavior. CO2- App (20)
4. (a) Compare the inspection requirements to prevent collapse vulnerability in a precast structures. CO5-Ana (20)  
Or  
(b) Formulate a Design requirements for progressive collapse design. CO5- Ana (20)

5. (a) Articulate in detail about the Principal rafters in industrial Structures. CO3-App (20)

Or

(b) Demonstrate about the various short shells for factory structures. CO3-App (20)