Reg. No. :

Question Paper Code: 32264

M.E. DEGREE EXAMINATION, MAY 2016

Second Semester

Structural Engineering

01PSE204 – PRECAST AND PREFABRICATED STRUCTURES

(Regulation 2013)

Duration: Three hours   Maximum: 100 Marks

Answer ALL Questions

(Use of IS 1893:2002, IS 13920:1990 and IS4326:1980 are permitted)

PART A - (10 x 2 = 20 Marks)

1. What is standardization?

2. List the advantages and disadvantages of prefabricated systems.

3. What is curtain wall?

4. Write a note on expansion joint.

5. List the disadvantages of precast construction.

6. Name the different structural connections of floors.

7. What are connections?

8. Define sandwich panels.

9. How are cyclones formed?

10. Define carbel.

PART - B (5 x 14 = 70 Marks)

11. (a) Explain the production, transportation and erection of prefabricated elements. (14)

Or

(b) Discuss the concept and importance of disunity of structures with neat sketches. (14)

12. (a) Write a brief note on framed buildings with partial and curtain walls with neat sketch.
(14)

Or

(b) Explain in detail about long wall and cross wall large panel building. (14)

13. (a) Explain the design procedure to calculate the ultimate strength in flexure and shear of a floor. (14)

Or

(b) Discuss in detail about the types of prefabricated roof slabs and its insulation requirements. (14)

14. (a) Explain in detail the importance of precast wall in transfer of gravity and lateral loads. (14)

Or

(b) Write the steps involved in analysis and design of shear walls. (14)

15. (a) Explain the components of single storey industrial shed with neat sketch. Also give the erection procedure. (14)

Or

(b) Explain the design procedure of carbels. (14)

PART - C (1 x 10 = 10 Marks)

16. (a) Explain with neat sketch (i) column to column connection and (ii) beam to beam connection. (10)

Or

(b) Write in detail about transportation and installation of prefabricated building system and its elements. (10)

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