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**Question Paper Code : 21195**

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2013.

Eighth Semester

Civil Engineering

CE 2071/080100066/CE 811 — REPAIR AND REHABILITATION OF  
STRUCTURES

(Regulation 2008)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Define a defect in structures.
2. Write short notes on weekly and monthly maintenance.
3. List any four durability parameters.
4. Discuss the effect of temperature on concrete.
5. What are admixtures? Give examples.
6. What do you mean by aspect ratio?
7. What is a dry pack?
8. Explain the mechanism of cathodic protection.
9. What are the disadvantages of FRP?
10. How do you determine the temperature attained by concrete during fire?

PART B — (5 × 16 = 80 marks)

11. (a) (i) Discuss the importance of maintenance. (6)
- (ii) With graph explain the service life behaviour of a concrete structure with respect to maintenance. (10)

Or

- (b) With a flowchart explain the procedure for assessing the damages of a distressed structure.
12. (a) Explain the checks you will make on the day of concreting to assure quality of concrete.

Or

- (b) Explain in detail about the thermal properties of concrete.
13. (a) Briefly explain about the manufacturing process and applications of expansive cement.

Or

- (b) Tabulate the different types of fibres used in concrete. What are its advantages?
14. (a) Explain the process of epoxy injection. Also explain routing and scaling with sketches.

Or

- (b) Explain in detail any two corrosion protection methods.
15. (a) With simple sketches explain the methods of improving the strength of existing columns and beams.

Or

- (b) Explain the different methods of strengthening the concrete structures against earthquake.