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**Question Paper Code: 39105**

B.E. / B.Tech. DEGREE EXAMINATION, APRIL 2019

Elective

Civil Engineering

01UCE905 - REPAIR AND REHABILITATION OF STRUCTURES

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions

PART A - (10 x 2 = 20 Marks)

1. Define the term maintenance.
2. Define the term defect and crazing.
3. What is meant by coefficient of thermal expansion on concrete?
4. What do you mean by structural cracks?
5. Write the mechanism of accelerators.
6. Write short note on Geo-polymer concrete.
7. What are the methods involved in Epoxy injection?
8. Write the types of shoring.
9. Evaluate the forms of Fire damages.
10. Write a short note on leakage.

PART - B (5 x 16 = 80 Marks)

11. (a) Analyse briefly the assessment procedure for evaluating damaged structure. (16)

Or

(b) What is maintenance? Explain in detail about the facets and importance of maintenance. (16)

12. (a) (i) Why the quality assurance for structures is needed? Explain the components of quality assurance for building. (10)

(ii) Briefly explain the effect of chemicals on concrete. (6)

Or

(b) Elaborately explain about the effect of temperature on concrete. (16)

13. (a) Explain in detail about the manufacturing procedure and applications of sulphur infiltrated concrete. (16)

Or

(b) Briefly explain about vacuum concrete. (16)

14. (a) Explain in detail any two corrosion protection methods. (16)

Or

(b) Explain the various corrosion protection in detail. (16)

15. (a) How do you demolish a high rise building situated in densely populated area? Explain in detail. (16)

Or

(b) How do you repair and rehabilitate a structure distressed due to fire? Explain in detail. (16)

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