



10CT831

Eighth Semester B.E. Degree Examination, Dec.2019/Jan.2020
Repair and Rehabilitation of Structures

Time: 3 hrs.

Max. Marks:100

Note: Answer any FIVE full questions, selecting at least TWO questions from each part.

PART – A

- 1 a. Explain the following and list different of test
i) Destructive testing (12 Marks)
ii) Non-destructive test. (08 Marks)
b. Explain the requirement for assessment of structural strength of any structure. (10 Marks)
- 2 a. Explain Rebound hammer test with neat sketch. (10 Marks)
b. Explain the principle and working procedure of ultrasonic pulse velocity test. (10 Marks)
- 3 a. Explain the damage assessment parameters for repair and restoration of structure. (12 Marks)
b. Explain permeability test. (08 Marks)
- 4 a. Explain with neat sketch repair method for RCC beam. (10 Marks)
b. Explain the strengthening or repair method for column with neat sketch. (10 Marks)

PART – B

- 5 a. Explain the following concrete repair chemicals
i) Epoxy Resin based (12 Marks)
ii) Acrylic polymer based
iii) SBR based. (08 Marks)
b. Explain application of Fiber Reinforced Polymer (FRP) in repair and strengthening of structural elements. (10 Marks)
- 6 a. Explain the ductility provisions of Earthquake resistant structures. (10 Marks)
b. Explain different types of dampers. (10 Marks)
- 7 a. What is retrofitting? Explain the method of retrofitting technique for concrete bridge. (10 Marks)
b. Explain fire Damage assessment by
i) Differential Thermal Analysis (DTA) (10 Marks)
ii) X-ray Diffraction (XRD)
- 8 a. Explain Demolition process and methods for structures. (12 Marks)
b. Explain different methods of repairing cracks of a structure. (08 Marks)

* * * * *

Important Note : 1. On completing your answers, compulsorily draw diagonal cross lines on the remaining blank pages.
2. Any revealing of identification, appeal to evaluator and /or equations written eg, 42+8 = 50, will be treated as malpractice.