

Code No: 137GJ

R16

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY HYDERABAD

B. Tech IV Year I Semester Examinations, March - 2021

REHABILITATION AND RETROFITTING OF STRUCTURES

(Civil Engineering)

Time: 3 Hours

Max. Marks: 75

Answer any Five Questions
All Questions Carry Equal Marks

1. Explain the various causes for deterioration of concrete structures [15]
2. Discuss about the advantages and disadvantages of NDT, explain any two NDT methods for condition assessment of concrete structures. [15]
3. What is reinforcement corrosion? What are the causes for corrosion, discuss about the concrete resistivity technique for corrosion assessment in concrete structures. [15]
4. How do you repair a structure distressed due to aggressive environment? Describe in detail. [15]
5. Discuss about application of smart sensors for health monitoring of structures, its advantages and limitations. [15]
6. Explain about the following repair techniques
a) Shotcreting b) Guniting c) Underpinning. [5+5+5]
7. Distinguish Strengthening techniques fibrocement jacketing and FRP jacketing. [15]
- 8.a) Explain under what circumstances premature deterioration of structures take place.
b) Explain how the materials and workmanship affect the performance of structures. [8+7]

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