

B.E Civil-8 e-scheme

15.5.23

40+40+40+17

147

Duration: 3hrs

[Max Marks: 80]

- N.B.: (1) Question No 1 is Compulsory.
(2) Attempt any three questions out of the remaining five.
(3) Each full question carries 20 marks.

- 1 Answer any FOUR
- a Differentiate between defect, distress and deterioration of structures (05 M)
 - b What are the essential parameters for the selection of a suitable material for repair? (05 M)
 - c What are the factors affecting readings of a Rebound hammer? (05 M)
 - d Write a short note on epoxy resins (05 M)
 - e List out the methods of seismic retrofitting (05 M)
- 2 a Explain various techniques for crack measurement with the help of sketches (10 M)
- b Write the applications of following
- (i) Passivator (05 M)
 - (ii) Bonding agent (05 M)
- 3 a What is cathodic protection of reinforcement? Explain the procedure (10 M)
- b Explain any one semi destructive test for strength estimation of concrete? (05 M)
- c Briefly explain slab jacking (05M)
- 4 a With the help of neat sketches, explain defects in welded joints (10 M)
- b Briefly explain shoring and its types (05 M)
- c Explain injection grouting (05 M)
- 5 a Illustrate the following methods used for rehabilitation of concrete structures (10 M)
- (i) Plate bonding
 - (ii) RCC jacketing
- b What special care should be taken during repair of heritage structures? (05 M)
- c Explain polymer modified concrete and its applications (05 M)
- 6 Write short notes on
- a Lamellar tearing (05 M)
 - b Base Isolation (05 M)
 - c Life cycle cost of structure (05 M)
 - d Routing and sealing of cracks (05 M)

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