CBCS SCHEME

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18CV824

Eighth Semester B.E. Degree Examination, June/July. 2023
Rehabilitation and Retrofitting

Time: 3 hrs. Max. Marks: 100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. Define distress of concrete. Explain the causes of distress in concrete in brief. **(10 Marks)**

b. Describe the mechanism of plastic and drying Shrinkage and also enlist the precautionary measures. **(10 Marks)**

OR

2 a. Define durability of concrete. Explain the effect of carbonation and alkali action on durability of concrete. **(10 Marks)**

b. Discuss the evaluation procedure for a concrete structure damaged due to earthquake. **(10 Marks)**

Module-2

3 a. Explain the damage assessment producer with a flow chart. **(10 Marks)**

b. Describe Rebound hammer and penetration resistance test for assessing the strength of concrete structure. **(10 Marks)**

OR

4 a. Discuss the purpose and general procedure for investigation of damaged concrete structure. **(10 Marks)**

b. Distinguish the types of testing systems for hardened concrete and also describe the method of load test for assessing the strength of in-situ concrete member. **(10 Marks)**

Module-3

5 a. Explain the effects of climate and temperature actions on durability of concrete structure. **(10 Marks)**

b. Define Corrosion. Explain the corrosion mechanism in reinforced concrete with a neat sketch. **(10 Marks)**

OR

6 a. Discuss the influence of design and construction errors on durability of concrete. **(10 Marks)**

b. Describe corrosion inhibitors and cathode protection techniques for preventing corrosion of reinforcements. **(10 Marks)**

Module-4

7 a. Define Maintenance. Describe the facts and importance of maintenance. **(10 Marks)**

b. Explain the detail restoration of column by Jacketing technique with sketches. **(10 Marks)**

OR

8	a.	Describe the types and necessities of maintenance.	**(10 Marks)**
	b.	Explain External bonding and near surface mounted technique in detail	**(10 Marks)**

Module-5

9	a.	Discuss the different types of fibers and their roles as a repair material.	**(10 Marks)**
	b.	Describe the types of chemical admixture for repair of cracks.	**(10 Marks)**

OR

10	a.	Explain different types of mortars for repair of cracks.	**(10 Marks)**
	b.	Describe Guniting shotcreting methods as repair techniques.	**(10 Marks)**

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