

THE KAVERY ENGINEERING COLLEGE
(An Autonomous Institution)

B.E/B.TECH DEGREE END SEMESTER THEORY EXAMINATIONS, APRIL-MAY 2025

Fifth /Sixth Semester

Civil Engineering

CE3005-Rehabilitation /Heritage Restoration

Regulations - 2021

Duration : 3 Hrs

Maximum : 100 Marks

PART – A (ANSWER ALL QUESTIONS) (Marks 10*2=20)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
1.	What are the important aspects of rehabilitation?	L1	1	2
2.	State the causes of deterioration in reinforced concrete structures.	L2	1	2
3.	How the cracks are classified according to their width?	L1	2	2
4.	Define quality assurance and mention its need in concrete structures.	L1	2	2
5.	State the merits and applications of SIFCON.	L1	3	2
6.	List the materials used for making geo-polymer concrete.	L1	3	2
7.	Define shoring and mention its purpose.	L1	4	2
8.	State the properties of corrosion inhibitors.	L2	4	2
9.	List out some strengthening techniques.	L1	5	2
10.	List two methods of retrofitting of concrete structures subjected to leakage.	L1	5	2

PART – B (ANSWER ALL QUESTIONS) (Marks 5*16 = 80)

<i>Q.No</i>	<i>Questions</i>	<i>BLT</i>	<i>CO</i>	<i>Marks</i>
11.	a Explain the step by step procedure to be followed to assess damage structure and to carry out rehabilitation work.	L3	1	16
	Or			
	b What is meant by distressed concrete? What are the causes of distress in concrete? How it is treated?	L2	1	16
12.	a i What is quality assurance in concrete construction? Discuss QA of concrete construction?	L2	2	8
	ii What are the responsibilities of a quality control engineer in a construction site?	L2	2	8
	Or			
	b Give a detailed note on the property “Strength” of concrete	L3	2	16

discussing its influencing factors and discussing its influencing factors and discuss any two methods to enhance it.

13.	a	Explain briefly the materials, mechanisms and behaviour of fresh and hardened state of high performance concrete. Also indicates their merits and demerits in construction practices.	L3	3	16
		Or			
	b	Explain in detail about the manufacturing procedure, types and application of polymer concrete.	L3	3	16
14.	a i	List the significance of performance and integrity test on concrete and explain any one method in detail.	L3	4	8
	ii	Write the step by step procedure adopted in epoxy injection for repair works.	L3	4	8
		Or			
	b	Describe the process of rebar corrosion in concrete. Also discuss the various techniques of its corrosion protection.	L3	4	16
15.	a	Explain the advance techniques available to strengthen the existing structures.	L3	5	16
		Or			
	b	Explain the technique of adding external reinforcement for strengthening.	L3	5	16