

ANURAG Engineering College

(An Autonomous Institution)

IV B.Tech II Semester Regular/Supplementary Examinations, April - 2024

REPAIR AND REHABILITATION OF STRUCTURES

(CIVIL ENGINEERING)

Time: 3 Hours**Max. Marks: 75****Section – A (Short Answer type questions)****(25 Marks)****Answer All Questions**

	Course Outcome	B.T Level	Marks
1. List down the various facets of maintenance	CO1	L1	2M
2. What is the difference between Rehabilitation and Retrofitting?	CO1	L1	3M
3. What is meant by Guniting?	CO2	L1	2M
4. List the advantages of cathodic protection system over conventional method of repetitive repair and replacement	CO2	L1	3M
5. What are the requirements of a good preservative used in timber?	CO3	L1	2M
6. What are the factors affecting on weldability?	CO3	L1	3M
7. What are the different methods to repair underwater concrete structures?	CO4	L1	2M
8. List the common degradation processes associated with groundwater in tunnels	CO4	L1	3M
9. What are the different underpinning methods used for foundation strengthening:	CO5	L1	2M
10. Write a short note on Mechanism of Base Isolation.	CO5	L1	3M

Section B (Essay Questions)**Answer all questions, each question carries equal marks.****(5 X 10M = 50M)**

11. A) Describe in detail about the repair aspect of maintenance	CO1	L2	10M
OR			
B) List and explain the factors affecting the selection of Repair materials	CO1	L2	10M
12. A) With sketches explain how you improve the load carrying capacity of columns and beams.	CO2	L2	10M
OR			
B) What are the most common methods of concrete crack repair and explain any two in detail with neat sketch	CO2	L2	10M
13. A) Explain in brief how repairs in timber structures are performed	CO3	L2	10M
OR			
B) What are the different methods used in the preparation of surface of a corroded steel.	CO3	L2	10M
14. A) With a case study explain the damages in a masonry dam and explain the repair methods to encounter the same	CO4	L2	10M
OR			
B) What are the possible reasons for water leakage in concrete water tanks and write down the steps to be followed for the repair of concrete water tank leakage.	CO4	L2	10M
15. A) Explain the different methods of strengthening the concrete structures against earthquake?	CO5	L2	10M
OR			
B) Briefly explain the different methods in retrofitting of foundations	CO5	L2	10M