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ANNA UNIVERSITY (UNIVERSITY DEPARTMENTS)**B.E. /B.Tech / B. Arch (Full Time) - END SEMESTER EXAMINATIONS, DEC 2024****VI Semester CIVIL ENGINEERING****CE5018 - MAINTENANCE, REPAIR AND REHABILITATION OF STRUCTURES****(Regulation 2019)**

Time: 3hrs

Max. Marks: 100

PART- A(10x2=20 Marks)

Answer all Questions

Q.No	Questions	Marks
1	Define an active crack.	2
2	What is meant by Thermogravimetry?	2
3	How do you identify a shear crack?	2
4	Tabulate the cover thickness for various exposure conditions of concrete.	2
5	Define HPC as per ACI.	2
6	Briefly write about Reactive powder concrete (RPC).	2
7	Define Shoring.	2
8	Explain the principle of corrosion inhibition.	2
9	List any two water proofing techniques.	2
10	What is meant by SDA?	2

PART- B(5x 13=65 Marks)

Q.No	Questions	Marks
11 (a)	With a flowchart explain the damage assessment procedure.	13
(OR)		
11 (b)	Explain in detail about various facets and importance of Maintenance.	13
12 (a)	Explain the service life behavior of a concrete structure.	13
(OR)		
12 (b)	With Chemical equation explain the mechanism of corrosion.	13
13 (a)	Define High strength concrete. What are the special materials needed to produce HSC? Explain its advantages and applications.	13
(OR)		
13 (b)	Explain any three concrete made with industrial wastes. Also write their properties and applications.	13
14 (a)	List any eight Non-destructive testing techniques used for assessing the integrity of existing concrete. Explain any one in detail.	13
(OR)		
14 (b)	Explain the Fusion bonded epoxy coating process of rebars. Write the merits and demerits.	13
15 (a)	How do you repair a structure distressed due to Fire?	13
(OR)		
15 (b)	Explain any two water proofing techniques.	13

PART- C(1x 15=15 Marks)**(Q.No. 16 is Compulsory)**

Q.No	Questions	Marks
16	How do you plan and demolish a dilapidated high-rise residential building? Explain the step by step procedure.	15