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**Question Paper Code : 40763**

B.E./B.Tech. DEGREE EXAMINATION, APRIL/MAY 2018  
Eighth Semester  
Civil Engineering  
CE 6021 – REPAIR AND REHABILITATION OF STRUCTURES  
(Regulations 2013)

Time : Three Hours

Maximum : 100 Marks

Answer ALL questions.

PART – A

(10×2=20 Marks)

1. Define maintenance.
2. List out any four causes of deterioration of structures.
3. What are the factors that affect the durability of concrete ?
4. State the importance of cover thickness in concrete.
5. List the types of Polymer concrete.
6. What is meant by Geo-polymer concrete ? List the materials used for making geopolymer concrete.
7. What is the purpose of underpinning ?
8. State the properties of corrosion inhibitors.
9. List the methods adopted to overcome low member strength in concrete structures.
10. Name any four Engineered demolition techniques for RC Structures.

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PART - B

(5×16=80 Marks)

11. a) Explain the steps involved in the assessment procedure for evaluating the damages and to carry out rehabilitation work.  
(OR)  
b) Write the various aspects of inspection.
12. a) Explain the different types of cracks found in concrete structures. Also list the remedial measures.  
(OR)  
b) Discuss the effects of temperature and climate on concrete structures.
13. a) Explain the manufacturing process, properties and uses of High performance concrete.  
(OR)  
b) Explain in detail  
i) Self Compacting Concrete. (8)  
ii) Polymer Concrete. (8)
14. a) Write elaborate notes on the following Non Destructive testing techniques as per IS.  
i) Rebound Hammer test. (8)  
ii) Ultrasonic pulse velocity. (8)  
(OR)  
b) Write short notes on mechanism of  
i) Epoxy injection. (8)  
ii) Underpinning. (8)
15. a) Discuss the impulsion method of demolition of structures.  
(OR)  
b) How do you repair and rehabilitate a structure damaged due to fire ?