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Question Paper Code : 50245

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017

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. Differentiate between the terms maintenance and rehabilitation.
2. Write the meaning of the term inspection and mention its purpose.
3. Define durability and name two tests to assess durability of concrete.
4. Define quality assurance and mention its need in concrete structures.
5. Mention a salient feature and an application of polymer concrete.
6. List two industrial wastes used as an alternative ingredient in concrete.
7. Define shoring and write its purpose.
8. Name two non-destructive tests used for assessing the quality of concrete.
9. List two techniques of demolition used in construction projects.
10. List two methods of retrofitting of concrete structures subjected to leakage.

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PART - B

(5×16=80 Marks)

11. a) Discuss the procedure of assessment for evaluating a damaged structure bringing out the vital components at each stage. (16)
- (OR)
- b) Briefly discuss the various causes of distress in concrete structures mentioning its effects. (16)
12. a) Give a detailed note on the property "strength" of concrete discussing its influencing factors and discuss any two methods to enhance it. (16)
- (OR)
- b) List the various types of corrosion in concrete discussing its phenomena, causes and effects. Also suggest any one method of protection against each type of corrosion. (16)
13. a) Discuss the method of manufacture, properties and uses of Sulphur Infiltrated Concrete. (16)
- (OR)
- b) Describe the method of manufacture, properties and uses of Fibre reinforced concrete. (16)
14. a) Describe the process of rebar corrosion in concrete. Also discuss the various techniques of its corrosion protection. (16)
- (OR)
- b) Define the term underpinning. Discuss any two of its methods mentioning its applicability. (16)
15. a) List the various methods of Engineered demolition of structures with applicability and discuss any two of the methods in detail. (16)
- (OR)
- b) Take a case study of a building affected by fire and discuss its various effects. Also suggest suitable methods of remedy. (16)
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