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H – 2828

Reg. No.

Name :

Eighth Semester B.Tech. Degree Examination, November 2019

(2013 Scheme)

13.805.8 : REPAIR AND REHABILITATION OF STRUCTURES (C)

Time : 3 Hours

Max. Marks : 100

Answer **all** questions from Part A and one full question from each Module of Part B

PART – A

1. List out the structural design errors that may happen during the design of a structure.
2. Explain the deteriorations that may occur due to coastal environment.
3. Explain the working principle of rebound hammer test.
4. Explain the methods available for repair of steel structures.
5. With neat sketches explain the methods and materials used in the process of guiniting.

(5 × 4 = 20 Marks)

PART – B

Module – I

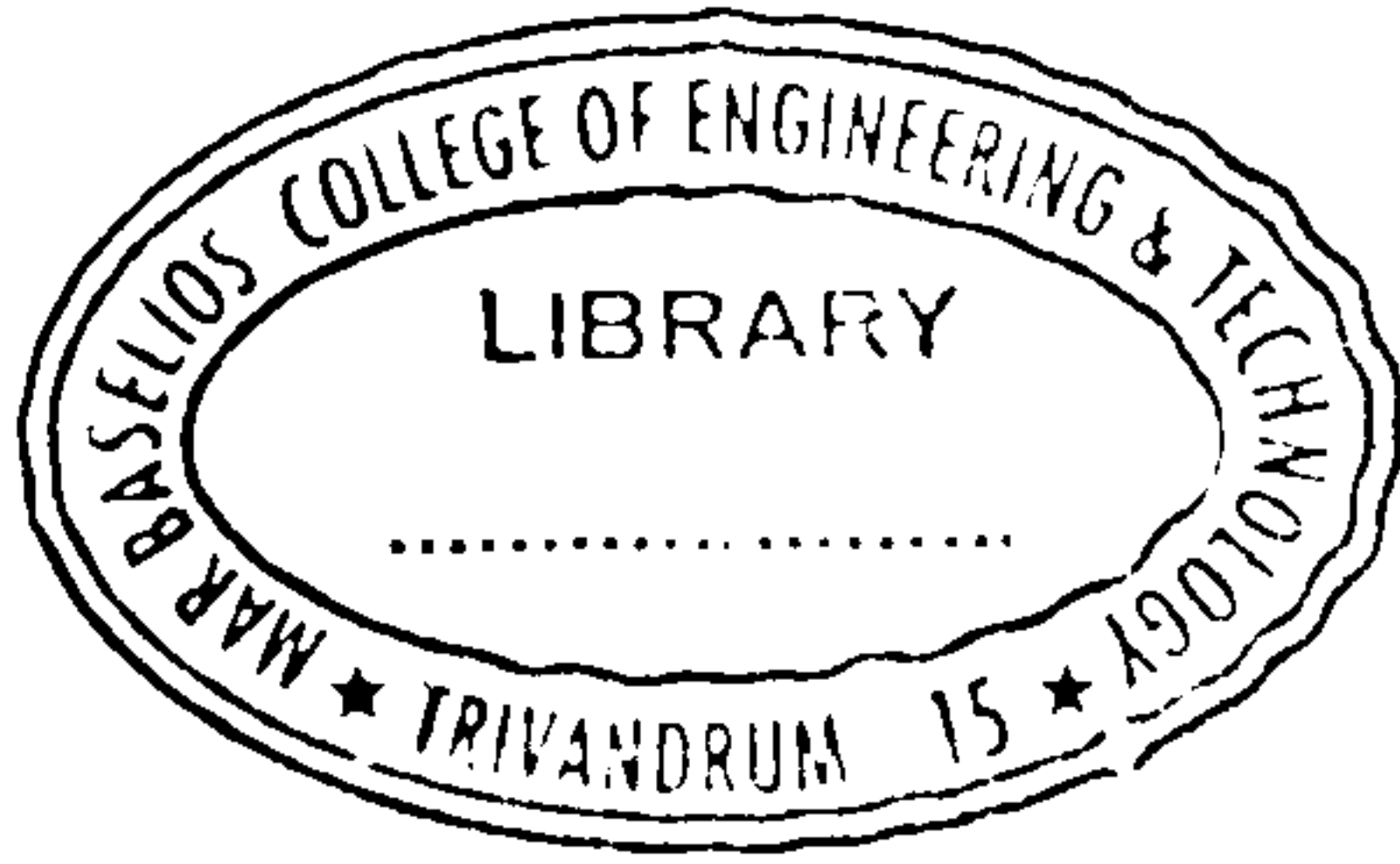
6. Explain in detail with neat sketches, the construction errors that cause deterioration of concrete structures.

OR

7. Explain with neat sketches the deterioration that may occur in steel structures due to fatigue and impact loading.

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Module – II

8. Explain in detail about the data that would be collected during a visual inspection of a
- concrete structure
 - Steel structure.

OR

9. Explain in detail the crack detection techniques used in R.C. structures.

Module – III

10. (a) Explain the techniques available for repairing of brick masonry structures.
- (b) Explain how pre-stressing technique could be used for repair of damaged beams.

OR

11. Explain the methods available for the prevention of corrosion in steel bars and explain the merits and demerits of the methods.

Module – IV

12. Explain with neat sketches how ferrocement and fibre concrete could be used as repair materials for repairing of beams, columns and beam column joints?

OR

13. Assume that none of the buildings constructed by you the basement car parking is getting stagnated during rainy season due to seepage of water. Explain the water proofing technique that you would adapt for the same. Explain the procedure in detail.

(4 × 20 = 80 Marks)

