

# L. D. COLLEGE OF ENGINEERING, AHMEDABAD (GTU)

8<sup>th</sup> Semester Civil Engineering - PDDC 2013 Batch

**Subject Code & Name:** X80605 - Repairs and Rehabilitation of Structures

## Assignment

1. Explain the causes of distress in structures.
2. What is the meaning of durable concrete? What are the test performed to check the durability?
3. Clearly distinguish the three terms: Repair, Rehabilitation and Retrofitting
4. Write short note on Foamed Concrete.
5. Write short note on Sulphur infiltrated concrete
6. Elaborate the use of polymer concrete.
7. How Vacuum concrete will be made up? Elaborate its uses
8. Explain the terms: Strengthening, Restoration, repair and Retrofitting.
9. Explain the term durability of concrete and factors affecting it.
10. Explain the term permeability of concrete and factors affecting it.
11. Enlist the methods of corrosion protection. Explain any one of them.
12. List out various Non-Destructive Test (NDT) used to determine strength of existing structure. Explain any one of them.
13. Explain the Significance of quality control. What are the recommendations given in I.S.456-2000 to produce good quality concrete?
14. Explain concrete repairing by grouting.
15. Explain Temperature effect on concrete.
16. What do you understand by sulphate attack on concrete? Discuss the factors responsible for it. How does it affect RCC elements?
17. What are the main objectives of condition assessment of structure?
18. Write the significance of cracking of concrete. What are the major causes of cracking in concrete and how can it be prevented?
19. Enlist Common design and construction errors.
20. Explain shoring and underpinning technique for foundation rehabilitation.
21. Differentiate between the following
  - A. Rehabilitation & Retrofitting
  - B. Porosity & Permeability
  - C. Micro-Crack & Macro Crack
  - D. Plastic Shrinkage & Drying Shrinkage
22. What is the importance of the field and laboratory testing for damage assessment of the structure?
23. Which are the distinct stages to be recognized while taking up any repair work.
24. What is meant by Jacketing? Discuss repair and strengthening of columns by Jacketing.

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