



**C14-C-604**

**4719**

**BOARD DIPLOMA EXAMINATION, (C-14)**

**OCT/NOV—2017**

**DCE—SIXTH SEMESTER EXAMINATION**

**CONSTRUCTION FAILURES, REPAIRS AND MAINTENANCE**

*Time* : 3 hours ]

[ *Total Marks* : 80

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**PART—A**

3×10=30

**Instructions** : (1) Answer **all** questions.

(2) Each question carries **three** marks.

(3) Answers should be brief and straight to the point and shall not exceed *five* simple sentences.

1. State any three causes of the structural failures. 3
2. State the effect of lateral movement of soil on foundations. 3
3. Mention any three remedies to prevent failure of pile foundation. 3
4. State the controlling measures of slope failures in surface construction. 3
5. Define spalling of concrete. 3
6. State the effects of aging in masonry. 3
7. Define (a) natural disaster and (b) man-made disaster. 1½+1½=3
8. Define rain ponding effect. 3

- \* 9. Mention any three causes of cracks in buildings. 3
10. State the method of removing rust stain from floor. 3

**PART—B**

10×5=50

**Instructions :** (1) Answer *any five* questions.

(2) Each question carries **ten** marks.

(3) Answers should be comprehensive and the criterion for valuation is the content but not the length of the answer.

11. (a) Describe foundation failure due to load transfer. 5  
(b) Describe foundation failure due to uplift in expansive soil. 5
12. Explain about failures and mention the control measures involved in abutment in surface construction. 10
13. (a) Explain about construction error in masonry. 5  
(b) Explain about masonry cladding. 5
14. (a) Explain about concrete failure due to improper mix design. 5  
(b) Explain about concrete failure due to temperature change. 5
15. (a) Explain the failure due to overload in construction. 5  
(b) What are the failures involved due to vibration and explosion? 5
16. Explain the causes of collapse failures in structures and mention the control measures for rectifying the failures. 10
- \* 17. Explain the methods of maintenance of roads. 10
18. Explain the methods of solving dampness in a structure. 10

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