



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

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
