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BOARD DIPLOMA EXAMINATION, (C-14)

MARCH/APRIL—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. Define the following : 1½+1½=3
 - (a) Construction defect
 - (b) Construction failure
2. Mention any six different modes of failures of foundations. 3
3. State the common construction failures in tunnels. 3
4. State any three causes of retaining wall failure. 3
5. Define spalling of concrete. 3
6. State the defects in masonry cladding. 3
7. Mention any three causes of natural disaster. 3
8. State the effects on building due to storm at sea. 3
9. Mention any six defects in buildings. 3

10. Define the following :

$1\frac{1}{2} + 1\frac{1}{2} = 3$

- (a) Guniting
- (b) Cementation

PART—B

$10 \times 5 = 50$

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. Explain about failures and remedies involved in pile foundations. 10
- 12. Explain about failures and control measures involved in stone pitching in surface construction. 10
- 13. Explain about wall failures in masonry and mention the repairs involved for rectifying the failures. 10
- 14. (a) Explain about the effect of shrinkage in concrete. 5
(b) Explain about the concrete failure due to compression. 5
- 15. Explain the causes of collapse failures in structures and mention the control measures for rectifying the failures. 10
- 16. (a) Explain about failures due to ignorance and negligence. 5
(b) Explain about the supervision in designing and construction. 5
- 17. (a) Explain about maintenance problems in sewer system. 5
(b) Explain about maintenance problems in electrical installation. 5
- 18. Explain methods of repairs to canal linings. 10
