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BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2023

DCE – FIFTH 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 failure and write any two causes of failure.
2. Write a brief note on earthquake effect on foundation.
3. Define settlement and differential settlement.
4. Define geomembranes.
5. Write about masonry cladding.
6. Define spalling of concrete.
7. What are man-made failures?
8. What is rain ponding effect?
9. What are the causes of dampness?
10. State the need for maintenance of buildings.

- Instructions :** (1) Answer **all** questions.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. (a) Describe foundation failure due to load transfer and water level changes.

(OR)

(b) Explain the failures in sewers and tunnels and also explain the remedies to be taken.

12. (a) Explain (i) revetment and (ii) pitching in surface construction failure.

(OR)

(b) Explain about failures and mention the control measures involved in abutment in surface construction.

13. (a) Write short notes on the following failures in concrete :

(i) Rusting of embedded steel

(ii) Surface disintegration due to fire

(OR)

(b) Explain plastering failures and its repairs.

14. (a) How are natural disasters caused? Explain the repairs involved in it.

(OR)

(b) Explain the causes of collapse failures in structures and mention the control measures.

15. (a) Explain the methods of maintenance for any two types of roads.

(OR)

(b) Explain the methods of repairs to canal lining.

PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

16. Explain the failures in earthen bunds and their control measures.

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