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C16-C-505

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BOARD DIPLOMA EXAMINATION, (C-16)

JUNE/JULY—2022

DCE - FIFTH SEMESTER EXAMINATION

ADVANCED CIVIL ENGINEERING TECHNOLOGIES

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. What are the key features of IoT?
2. What are the different components of IoT?
3. State the working principle of EDM.
4. Mention three systems of post-tensioning.
- * 5. List the advantages of Geogrids.
6. State the concept of reinforced anchored earth retaining system.
7. Mention the uses of prefabrication.
8. Write the importance of standardization in prefabrication.
9. State the importance of seismic zoning.
10. State the concepts of active and passive cooling.

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PART—B

10×5=50

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

11. Explain the application of IoT in smart buildings and infrastructure.
12. Briefly explain the segments of Geographical Positioning System.
13. Explain the properties of materials used in prestressed concrete.
14. Explain the Freyssinet system of post-tensioning with the help of a neat sketch.
15. Discuss various alternate techniques of retaining the earth.
16. Explain the prefabricated systems :
 - (a) Large Panel Systems
 - (b) Slab/Column with wall
17. Discuss the general principles to be followed for earthquake resistant construction of buildings.
- * 18. Explain the solar water heating system in buildings.

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