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C16-C-505

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BOARD DIPLOMA EXAMINATION, (C-16)

MAY/JUNE—2023

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. List any three applications of IoT in smart transportation.
2. State the working principle of IoT.
3. State the components of GIS.
4. List any three advantages of prestressed concrete.
- * 5. What is the retaining wall?
6. What is Gabion meshes?
7. Write any three advantages of prefabrication.
8. What is prefabricated building?
9. Differentiate between magnitude and intensity of earthquake.
10. How is solar energy utilized in air heaters?

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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.** State any ten applications of IoT in smart cities. 10
- 12.** Explain the principles and uses of EDM. 10
- 13.** (a) Write the advantages and disadvantages of prestressed concrete. 5
(b) Differentiate between pretensioning and post tensioning system. 5
- 14.** Explain various materials used for prestressed concrete. 10
- 15.** Explain the construction methodology of geogrid reinforced soil retaining wall. 10
- 16.** Explain the types of prefabricated systems. 10
- 17.** Explain the seismic resistant construction of brick and stone masonry buildings as per IS 4326. 10
- 18.** Explain the concept of active and passive solar heating and cooling. 10

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