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BOARD DIPLOMA EXAMINATION, (C-16)

JANUARY/FEBRUARY—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. Define the term IOT.
- 2. State any three advantages of IOT.
- 3. Define GPS and GIS.
- 4. Define the terms Prestress concrete, Pre-tensioning and Post-tensioning.
- 5. Define Retaining Wall and List any two types of Retaining Walls.
- 6. Define Gabion Mesh.
- 7. Define Prefabrication and State any two advantages of Prefabricated structures.
- 8. Define the term standardization and modularization.
- 9. List any three reasons for failure of buildings during earthquakes.
- 10. List the various solar energy utilities.

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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 homes. Smart Building and Infrastructure.
- 12. (a) Explain the working Principle of GPS.

(b) Write short notes on applications of GPS in Civil Engineering.
- 13. Write short notes on method of prestressing by Freyssinet system and Gifford Udall system.
- 14. Write short notes on Losses of Prestress in Pre-tensioning and Post-tensioning Members.
- 15. Write short notes on sheet Pile Walls and Diaphragm Walls.
- 16. Write short notes on factory prefabrication and site prefabrication. Also draw the flow chart.
- 17. Write short notes on shear wall and isolation concept in earthquake resistant design.
- 18. Write short notes on active and passive heating system.

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