

**6624**  
**BOARD DIPLOMA EXAMINATION**  
**MARCH/APRIL - 2019**  
**DIPLOMA IN CIVIL ENGINEERING**  
**ADVANCED CIVIL ENGINEERING TECHNOLOGIES**  
**FIFTH SEMESTER EXAMINATION**

**Time: 3 Hours**

**Total Marks: 80**

**PART - A (3m x 10 = 30m)**

*Note 1: Answer all questions and each question carries 3 marks*

*2: Answers should be brief and straight to the point and shall not exceed 5 simple sentences*

1. State the working principle of IoT
2. List any three applications of IoT in Smart Manufacturing
3. State the components of GIS
4. List any two systems of Pre-Tensioning Systems
5. What is Reinforced anchored earth wall
6. List any three advantages of earth retaining structures
7. List any three types of prefabricated systems
8. What is prefabrication technology in construction
9. Define a) Focus b) Fault c) Liquefaction
10. Define Solar energy

**PART - B (10m x 5 = 50m)**

*Note 1: Answer any five questions and each carries 10 marks*

*2: The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer*

11. (a) State the applications of IoT in Food and Water Tracking  
 (b) State the applications of IoT in Security
- \* 12. List Explain the segments of GPS
13. Explain the Freyssinet and Gifford-Udal system of post tensioning with necessary legible sketch
14. Explain the fundamental principles of prestressed concrete
15. Explain the advantages of using geomats in reinforced soil retaining walls
16. Explain the types of prefabricated systems

17. Explain the provisions of IS : 4326 of earthquake resistant structures

18. Explain about solar energy utilities in

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a) Water heaters

b) Air heaters

c) Cookers

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A.A.N.M&V.V.R.S.R POLYTECHNIC, GUDLAVALLERU, KRISHNA, AP

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