

**6613**  
**BOARD DIPLOMA EXAMINATION**  
**JUNE- 2019**

\* **DIPLOMA IN APPLIED ELECTRONICS AND INSTRUMENTATION**  
**INSTRUMENTATION IN PROCESS INDUSTRIES**  
**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 principle of power generation in Nuclear power plant
2. List the temperature measuring locations/points in a thermal power plant
3. State the Importance of measurement and instrumentation in power plant.
4. State the turbine shaft vibration
5. Define continuous distillation column
6. State the term distillation column
7. Draw flow scheme of pig iron production
8. List raw materials used in ISP
9. Define the term pulp
10. Write any three types of control system units used in pulp and paper industry

**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. Explain the process of power generation in Solar power plant with diagrams
12. Draw the block diagram of boiler process in thermal power plant and explain each block
13. Explain the measurement of turbine shaft speed with a toothed-wheel diagram

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14. Explain the following unit operations
  - a) Thermal cracking
  - b) Catalytic cracking
  - c) Polymerization
15. Explain the working of blast furnace with a diagram in ISP.
- 16A. Draw the general layout of a Petro chemical plant
  - B. Draw the diagram of measurement of temperature of furnace
17. Explain the mechanical pulping process with block diagram
18. Explain the general layout of paper making process with diagram

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