



C14-AEI-604

4708

BOARD DIPLOMA EXAMINATION, (C-14)

OCT/NOV—2017

DAEIE—SIXTH SEMESTER EXAMINATION

INSTRUMENTATION IN PROCESS INDUSTRIES

Time : 3 hours ]

[ Total Marks : 80

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**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 safety measures in boiler control.
2. List any three power generation methods.
3. List any three units in petrochemical plant.
4. Define polymerization.
5. List any three physical parameters to be measured in petrochemical plant.
6. Draw the diagram of blast furnace.
7. List any three major units of iron and steel plant.
8. List any three control system units in pulp and paper plant.
9. Mention any three grades of paper.
10. State the wet end operations in making paper.

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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 the criterion for valuation is the content but not the length of the answer.

- 11.** (a) State the importance of measurement and instrumentation in power plant. 3  
(b) Explain the working of condenser with diagram. 7
- 12.** Explain the following : 5+5  
(a) Flow measurement of feed water  
(b) Speed measurement of turbine
- 13.** Explain the process of power generation in thermal power plant with a diagram.
- 14.** Explain the working of distillation column with diagram.
- 15.** Explain the working of oxygen furnace with a diagram.
- 16.** (a) Explain the measurement of level of molten steel. 5  
(b) Explain the measurement of temperature in blast furnace. 5
- 17.** Explain the process of making paper in pulp and paper plant.
- 18.** Explain how the following instruments are used in pulp and paper plant : 5+5  
(a) Consistency sensor  
(b) Moisture analyzer

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