



C20-AEI-505

7610

BOARD DIPLOMA EXAMINATION, (C-20)

OCTOBER/NOVEMBER—2023

DAEI – FIFTH SEMESTER EXAMINATION

INSTRUMENTATION IN PROCESS INDUSTRIES

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 power generation methods.
2. Draw the diagram of single element drum level control of boiler.
3. Mention any three turbine trip conditions.
4. List any three basic steps in refinery process.
5. Define catalytic cracking.
6. Define polymerization.
7. List any three types of furnace used in iron and steel plant.
8. Define the term 'paper'.
9. List any three types of paper product.
10. List any three types of control system unit used in pulp and paper industry.

- Instructions :** (1) Answer either (a) or (b) from each question.
(2) Each question carries **eight** marks.
(3) Answers should be comprehensive and criterion for valuation is the content but not the length of the answer.

11. (a) Explain the general layout of thermal power plant with legible diagram.

(OR)

(b) Explain the process of power generation in hydroelectric power plant with diagram.

12. (a) Draw and explain the combustion system of a boiler in thermal plant.

(OR)

(b) Explain the measurement of flow of feed water with a differential pressure transducer with the help of diagram.

13. (a) Explain the general layout of petrochemical plant with diagram.

(OR)

(b) Explain the working of batch distillation column with a diagram.

14. (a) Explain the working of oxygen furnace with a diagram.

(OR)

(b) Draw and explain the flow scheme of pig iron production.

15. (a) Explain the graphic displays and alarms in Pulp and Paper Plant (PPP).

(OR)

(b) Explain the chemical pulping process with block diagram.

PART—C

10×1=10

- Instructions :** (1) Answer the following question.
(2) The question carries **ten** marks.
(3) Answer should be comprehensive and the criterion for valuation is the content but not the length of the answer.

- 16.** With the help of legible diagram, explain the measurement of eccentricity of the turbine.

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