



C16-AEI-505

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BOARD DIPLOMA EXAMINATION, (C-16)

AUGUST/SEPTEMBER—2021

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. State the principle of power generation in thermal power plant.
2. Write the important variables that need to be measured in thermal power plant.
3. List the flow measuring locations/points in a thermal power plant.
4. What is the turbine shaft vibration?
5. Define petroleum refinery.
6. Define thermal cracking.
7. List any three types of furnaces used in ISP.
- * 8. Draw the diagram of electric furnace.
9. List any three types of control system units used in pulp and paper industry.
10. Define the term 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 criterion for valuation is the content but not the length of the answer.

11. Explain the process of power generation in nuclear power plant with diagram.
12. Explain series fuel – air ratio control with diagram.
13. Explain steam/header pressure control with feed forward-plus-feedback control diagram.
14. Explain the working of batch distillation column with a diagram.
15. (a) Draw the block diagram of continuous distillation column.
(b) Draw flow scheme of steel production.
16. Explain the measurement of temperature of furnace with diagram.
17. Explain the general layout of paper making process with diagram.
18. Explain the mechanical pulping process with block diagram.

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