



C09-AEI-606B

3720

**BOARD DIPLOMA EXAMINATION, (C-09)
OCT/NOV—2016
DAEI—SIXTH SEMESTER EXAMINATION**

POWER PLANT INSTRUMENTATION

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. Define unit operation and unit processes.

2. List the variables of distillation column.

3. Classify different types of dryers.

4. Draw the *P* and *I* diagram of boiler.

5. List the mechanical parameters to be monitored by turbine supervisory system.

6. State the need of condenser to maintain vacuum.

7. List the advantages of hydrogen cooling system.

- * 8. State the principle of steam heater.
9. State the need of forced draft fan in power plant.
10. State the need of interlocks in power plant.

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. Explain the principle and working of nuclear power plant.
12. Explain the construction and operation of packed tower gas absorption.
13. Explain the principle and working of different types of solid-solid mixers and solid-liquid mixers.
14. Explain main header pressure control with necessary diagram.
15. (a) Explain the principle of operation of smoke density measurement.
- (b) List the various controls of main heat steam temperature control of boiler.
16. Explain lube oil temperature control with legible diagram.
17. List different types of pumps and explain the centrifugal pump used in power plant.
- * 18. Explain the operation of electrostatic precipitator with diagram.

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