

4463

BOARD DIPLOMA EXAMINATION, (C-14)
MARCH/APRIL-2019
DEEE - FOURTH SEMESTER EXAMINATION
POWER SYSTEMS - I (GENERATION)

Time: 3 Hours]

[Max. Marks : 80

PART-A**10x3=30M**

Instructions: 1) Answer **all** questions. Each question carries **Three** marks.
2) Answers should be brief and shall not exceed five simple sentences.

- 1) State the limitations of Non- Conventional type of Sources.
- 2) Define (i) Pulverization (ii) Condensation.
- 3) State the need of energy auditing.
- 4) A hydropower plant operates under an effective head of 50m and a discharge of 94m³/sec. Determine the power developed.
- 5) Classify the Hydro Electric power plant based on location.
- 6) List the Nuclear Fuels used in Nuclear power plant.
- 7) State the need of Coolant, Reflector and Control Rods in Nuclear reactor.
- 8) State the working principle of Solar Cell.
- 9) Define a) Load curve b) Maximum Demand.
- 10) State the effect of Load Factor and Diversity Factor on the cost of generation.

*

*

PART-B

5x10=50M

- Instructions:** 1) Answer any **five** questions.
2) Each question carries **ten** marks.
3) Answers should be comprehensive and the criteria for valuation is the content but not the length of the answer.

- 11) (a) List the requirements for setting up of thermal power station.
(b) Mention the requirements for selection of site for Thermal power plant.
- 12) (a) State the causes of pollution in thermal power plant.
(b) Explain the method of generating electrical power using Geo-Thermal power
- 13) Explain the working of Medium head hydro electric power station with layout diagram.
- 14) Explain the working of reactors in Nuclear power stations.
- 15) Explain the construction and working of Wind Mill with diagram.
- 16) Explain the working principle of different concentrating collectors with diagram.
- 17) (a) Differentiate between integrated operation and isolated operation of power stations.
(b) What is the effect of power factor on electricity tariff and list out the methods to improve P.F.

*

- 18) The load of power plant on a particular day is as follows

Time in Hrs.	12AM-5AM	5AM-8AM	8AM-6PM	6PM-8PM	8PM-10PM	10PM-12PM
Load in MW	20	60	100	120	80	20

Determine i) The energy generated per day ii) Load Factor

*

iii) Diversity Factor of the plant.

* * *