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C14-EE-403

**4463**

**BOARD DIPLOMA EXAMINATION, (C-14)**

**MARCH/APRIL—2021**

**DEEE - FOURTH SEMESTER EXAMINATION**

**POWER SYSTEMS - I (GENERATION)**

*Time : 3 hours ]*

*[ Total Marks : 80*

**PART—A**

4×5=20

- Instructions :** (1) Answer *any five* questions.  
(2) Each question carries **four** marks.  
(3) Answers should be brief and straight to the point and shall not exceed five simple sentences.

1. List any four electrical energy sources.
2. List any four Thermal Power Stations in South India.
3. List the advantages of pulverization.
4. List any four requirements to set up a Hydroelectric Power Station.
5. Classify Hydroelectric Power Stations based on the head of water.
6. State the merits of using nuclear energy in electrical power generation.
7. State the need of coolant in Nuclear Power Station.
8. List the basic components of a windmill.
9. Define load factor.
10. List the merits of integrated operation of Power Stations.

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## PART—B

15×4=60

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

11. (a) Explain the method of electrical power generation with geothermal power.  
(b) List the advantages of condensation in Thermal Power Station.
12. Explain the working of Thermal Power Station.
13. Explain the working of surge tank and spillgates in Hydroelectric Power Station.
14. Explain the working of reactor in Nuclear Power Station.
15. Explain the working principle of Solar Air Heater.
16. Explain the working principle of windmill.
17. Explain any three types of consumer tariffs.
18. Explain the effects of load factor and diversity factor on the cost of power generation.

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