



**C16-EE-402**

**6441**

**BOARD DIPLOMA EXAMINATION, (C-16)  
OCTOBER—2020  
DEEE—FOURTH SEMESTER EXAMINATION  
POWER SYSTEM—I (G & P)**

*Time : 3 hours ]*

*[ Total Marks : 80*

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**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 disadvantages of conventional type of sources.
2. State the need of energy conservation.
3. List the methods to control pollution.
4. What is the use of surge tank in hydroelectric power plant?
5. List the merits of using nuclear energy.
6. State the basic components of wind mill.
7. State the merits of integrated power station.
8. State the purposes of isolator, air break switch and knife switch.
9. List the precautions to be taken for applying differential protection to transformers.
10. State the important features of relay.

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*[ Contd....*

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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 the criteria for valuation are the content but not the length of the answer.

11. (a) List the requirements for setting up of thermal power station.  
(b) Explain about super heater.
12. Explain the working of medium head hydro power station with line diagram.
13. Explain the working of nuclear reactor with neat diagram.
14. Explain the working of solar pump set with block diagram.
15. The maximum demand of a 60 MW power station is 50 MW in a particular day. The power station supplies to various consumers having maximum demands of 6 MW, 8 MW, 16 MW and 20 MW. The daily load factor is 60%. Find (a) average load (b) energy supplied per day (c) demand factor and (d) diversity factor.
16. (a) Define power factor and explain one method of improving p.f.  
(b) Explain the scheme of surge protection with diagram.
17. Explain the working of SF<sub>6</sub> circuit breaker with neat diagram.
18. Explain the differential protection for alternators.

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