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BOARD DIPLOMA EXAMINATION
MARCH/APRIL - 2019
DIPLOMA IN ELECTRICAL AND ELECTRONICS ENGINEERING
POWER SYSTEMS -I (G& P)
FOURTH SEMESTER EXAMINATION

Time: 3 Hours **Total Marks: 80**

PART - A (3m x 10 = 30m)

Note 1:Answer all questions and each question carries 3 marks

2:Answers should be brief and straight to the point and shall not exceed 5 simple sentences

1. State the method of generation of Geo Thermal Power plant
2. List the different methods of Energy conservation
3. State the function of Electrostatic precipitator in thermal power station
4. Classify the Hydroelectric Power Stations on the basis of Duty
5. State any two merits & demerits of Pressurized water reactor
6. State the function of a Gear box in a Wind Mill
7. State the need of Energy Management
8. List any three advantages of SF_6 Circuit Breaker
9. State the effects of faults on Stator & Rotor of an Alternator
10. State the reasons for the Cause of Surges

PART - B (10m x 5 = 50m)

Note 1:Answer any five questions and each carries 10 marks

2:The answers should be comprehensive and the criteria for valuation is the content but not the length of the answer

11. Explain the function of each Component of Thermal Power Station with a line Diagram
12. A) State the principle of working of Hydroelectric power station
    B) State any six factors affecting the selection of site for hydroelectric Power Station
13. Explain the Fission and Fusion reactions in Nuclear Power Plant with neat sketch.
14. Explain the working principle of Wind Mill with neat sketch

15. An industrial consumer has a Maximum demand of **10 KW** with a load factor **50%**. If the Tariff is Rs. **150** per KVA of Maximum demand and **8** paise per unit consumed. Find the overall cost per unit at i) **UPF** ii) **0.7 P.F**

16. A) Explain the Phenomenon of Arc?
    B) Classify the Circuit Breakers based on medium of Arc Quenching

17. Explain the differential protection for stator of an Alternator with neat sketch

18A. Explain the effects of load factor and diversity factor on the cost of Generation of Electrical energy

B. Define Relay and State important features of relays

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