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Question Paper Code: 31334

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2016

Third Semester

Electrical and Electronics Engineering

01UEE304 - POWER PLANT ENGINEERING

(Regulation 2013)

Duration: Three hours

Maximum: 100 Marks

Answer ALL Questions.

PART A - (10 x 2 = 20 Marks)

1. What are super heaters used in steam power plants?
2. What is calorific value of fuel?
3. What are the demerits of diesel electric power plant?
4. Why the cooling system is necessary for a diesel engine?
5. Define nuclear binding energy.
6. List the nuclear power plant safety.
7. What are the classifications of geothermal energy?
8. What is meant by Kaplan turbine?
9. What are the different types of tariff?
10. Define load factor.

PART - B (5 x 16 = 80 Marks)

11. (a) Explain the working of modern thermal power plant with neat layout. (16)

Or

(b) (i) Explain in detail the modern ash handling system used in steam power plants.(10)

(ii) Briefly discuss about cogeneration systems. (6)

12. (a) Explain in detail about the various components of gas turbine power plants. (16)

Or

(b) Describe in detail about the layout diagram of diesel power plant. (16)

13. (a) Explain the working of a nuclear power plant with neat layout containing all sub systems. (16)

Or

(b) Explain in detail the operation of Boiling Water Reactor (BWR) and Pressurized Water Reactor (PWR) with necessary sketches. (16)

14. (a) Explain in detail about essential elements of hydroelectric power plant. (16)

Or

(b) Explain in detail about construction and working operation of fuel cell and also mention the advantages and disadvantages. (16)

15. (a) Discuss in detail regarding the pollution control technologies implemented for coal and nuclear power plants. (16)

Or

(b) Explain the following

(i) Site selection criteria for hydro power plant and nuclear power plant. (10)

(ii) Load duration curve and its significance. (6)