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Question Paper Code: 31334

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2019

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 is called superheated steam?
2. What is pulverization?
3. What are the processes of Brayton cycle?
4. What is the process in Integrated Gasifier based combined cycle power plant?
5. What is a CANDU reactor?
6. List the nuclear power plant safety.
7. List any four applications of diesel power plant.
8. What is meant by Kaplan turbine?
9. List the factors to be considered while choosing a site for steam power station.
10. Define load factor.

PART - B (5 x 16 = 80 Marks)

11. (a) Discuss in detail, the problems associated with fuel and ash handling in coal based power plant. (16)

Or

- (b) (i) Explain with a neat sketch, the function of super critical boiler. (8)
(ii) Write brief notes on co-generation systems. (8)
12. (a) Explain in detail about Otto cycle and processes with P-V and T-S diagrams. (16)

Or

- (b) Describe in detail about the layout diagram of diesel power plant. (16)
13. (a) (i) Explain the importance of nuclear waste management. (8)
(ii) What are the Safety measures for Nuclear power plants? (8)

Or

- (b) Explain in detail the operation of Boiling Water Reactor (BWR) and Pressurized Water Reactor (PWR) with necessary sketches. (16)
14. (a) (i) Compare Kaplan turbine and Francis turbine. (8)
(ii) Explain pumped storage power plant with its merits and demerits. (8)

Or

- (b) Explain in detail about construction and working operation of fuel cell and also mention the advantages and disadvantages. (16)
15. (a) (i) Explain in details about load duration curve on power plant. (10)
(ii) Describe the principles of economics scheduling. (6)

Or

- (b) Describe the various cost involved in construction of power plant. (16)