Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 20748

B.E./B.Tech. DEGREE EXAMINATIONS, NOVEMBER/DECEMBER 2023.

Fifth Semester

Mechanical Engineering

CME 384 — POWER PLANT ENGINEERING

(Regulations 2021)

Time : Three hours Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. Draw a schematic layout of modern coal power plant.

2. What is super critical boiler?

3. What is Otto cyle?

4. What is combined cycle power plant.

5. Draw a schematic layout of unclear power plant.

6. Write down the safety measures need to be followed in the nuclear power plant.

7. What is hydro electric power plant?

8. Write a note on Geo thermal power plant.

9. What are the different types of power tariff?

10. What is meant by load curve? What is load curve formula?

PART B — (5 × 13 = 65 marks)

11. (a) Explain with a neat sketch FBC boiler.

Or

(b) Discuss about binary cycle and cogeneration system.

12. (a) Discuss about Diesel cycle. With neat graph on P-V diagram.

Or

(b) Explain combined cycle power plant.

13. (a) Explain about pressurized water reactor in detail with neat sketch.

Or

(b) Discuss Gas cooled and liquid metal cooled reactor.

14. (a) With neat sketch explain hydro electric power plant.

Or

(b) Describe in detail about (i) Wind power plant (ii) Tidal power plant

15. (a) Explain bio gas and fuel cell power system.

Or

(b) Discuss about harnessing the electrical energy through solar photo voltaic (SPV).

PART C — (1 × 15 = 15 marks)

16. (a) Discuss about the power tariffs in the power plant.

Or

(b) Explain in detail about the pollution control technologies in coal and nuclear power plants.

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