

Reg. No. :

--	--	--	--	--	--	--	--	--	--

Question Paper Code: 31034

B.E. / B.Tech. DEGREE EXAMINATION, OCTOBER 2014.

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 demerits of thermal power plant?
2. Define efficiency of Rankine cycle.
3. What are the demerits of diesel electric power plant?
4. What is meant by combined cycle power plant?
5. Define nuclear binding energy.
6. What are the advantages of gas cooled reactors?
7. What is fuel cell?
8. What are the advantages of pumped storage plants?
9. What are the different types of tariff?
10. What is load duration curve?

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) With neat schematic diagram, explain the operation of a diesel power plant. Also discuss its merits and demerits. (16)

Or

(b) (i) Explain the operation of gas turbine power plant. (10)

(ii) Discuss in brief about the concept of integrated gasifier based combined cycle plant. (6)

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 the principle, construction and working of tidal power system. List out the advantages also. (16)

Or

(b) Discuss about the construction and working of solar photo voltaic and solar thermal system. (16)

15. (a) Compare the site selection criteria and operating costs of hydro, thermal and nuclear power plants in detail. (16)

Or

(b) Explain in detail about the waste disposal options for coal and nuclear power plants. (16)