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

Question Paper Code: 31334

B.E. / B.Tech. DEGREE EXAMINATION, NOVEMBER 2015

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 are the four main circuits of thermal power plant?
3. What do you mean by regeneration in gas turbine power plant?
4. What are the merits of diesel power plants?
5. What is the purpose of a moderator in a nuclear reactor?
6. What is nuclear fission?
7. What are the classifications of geothermal energy?
8. What are the advantages of fuel cells used in power generator?
9. List out the different power tariff types.
10. What is 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) Draw a layout of diesel power plant, showing various systems and explain each system in detail. (16)

Or

(b) Explain the working of open cycle and closed cycle gas turbine power plant and discuss their advantage and disadvantage. (16)

13. (a) With a layout diagram, explain the aspect of power generation from nuclear power plant. (16)

Or

(b) (i) Explain different types of nuclear reactions and initiation of nuclear reactions. (8)

(ii) Explain the working of pressurized water reactor with neat sketch. (8)

14. (a) With the help of a diagram explain the working of a pumped storage plant. Also discuss the relative merits and demerits of the plant. (16)

Or

(b) Explain the principle, concept, construction and working of tidal power plant with relevant sketches. (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)
