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

Question Paper Code: 31334

B.E. / B.Tech. DEGREE EXAMINATION, MAY 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 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. Define the term Breeding.
7. What is known as binding energy?
8. What are the components of Tidal power plants?
9. What is two part tariff?
10. What are the waste disposal options for Nuclear power plant?

PART - B (5 x 16 = 80 Marks)

11. (a) Explain the construction and working of any one High pressure boiler with a layout. (16)

Or

(b) (i) Draw a chart showing operations and devices used in coal handling plant. (8)

(ii) What are the different types of cooling towers? Explain with a neat sketch. (8)

12. (a) Explain in detail about Otto cycle and processes with P-V and T-S diagrams. (16)

Or

(b) (i) Explain in detail about Brayton cycle. (8)

(ii) Why is the Brayton cycle most suitable for gas turbine power? (8)

13. (a) (i) Explain the importance of nuclear waste management. (8)

(ii) What are the Safety measures for Nuclear power plants? (8)

Or

(b) (i) Explain the Gas cooled and Liquid metal cooled reactors. (8)

(ii) Explain briefly about radiation hazards and shielding. (8)

14. (a) (i) Compare Kaplan turbine and Francis turbine. (8)

(ii) Explain pumped storage power plant with its merits and demerits. (8)

Or

(b) (i) Explain with a neat diagram of wind electric generating power plant. (8)

(ii) Explain in detail about the various types of Wind energy system. (8)

15. (a) What is a tariff? Discuss and compare various tariff used in practice. (16)

Or

(b) (i) Explain the pollution control technologies including waste disposal options for coal power plant. (8)

(ii) What are load curves and load duration curves? Discuss their utility in the economics of generation. (8)