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Question Paper Code: 59324

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

Elective

Electrical and Electronics Engineering

15UEE924- ENERGY AUDIT

(Regulation 2015)

Duration: Three Hours

Maximum: 100 Marks

Answer ALL Questions

PART- A (5 x 3 = 15 Marks)

1. Explain the term energy audit. CO1-U
2. Write the expression for static fan efficiency. CO2-U
3. Examine the factors that affect energy efficiency in air compressors. CO3-Ana
4. Define one 'Ton of Refrigeration (TR)'. CO4-U
5. State input output method of boiler. CO5-U

PART - B (5x 14 = 70 Marks)

6. (a) Explain in detail the methodology for conducting a detailed energy audit. CO1-U (14)
Or
(b) Illustrate the essential elements of a monitoring and targeting system. CO1-U (14)
7. (a) Describe 'chain grate' and 'spreader stoker' type boiler with neat diagram. CO2-U (14)
Or
(b) Perform a case study on Energy Conservation in Steam Systems. CO2-U (14)
8. (a) Analyze the Energy conservation in Centrifugal pumps. CO3-Ana (14)
Or
(b) Analyze the energy performance assessment of fans. CO3-Ana (14)

9. (a) Explain the energy conservation opportunities in a cooling tower system. CO4-U (14)
- Or
- (b) Explain in detail about the factors which influence the energy consumption of lighting schemes. CO4-U (14)
10. (a) Evaluate the option of boiler replacement for the following boiler with a new boiler of 84% efficiency. The cost of new boiler is Rs. 30.00 laksh. CO5-Ana (14)
- Or
- (b) Examine the various Losses in Boiler. CO5-Ana (14)
- PART - C (1x 15 = 15 Marks)
11. (a) Summarize the Total Energy Systems CO1-U (15)
- Or
- (b) Explain in detail about steam traps and their application. CO2-U (15)