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Question Paper Code: 59032

B.E. / B.Tech. DEGREE EXAMINATION, NOV 2017

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. List out the basic elements of Monitoring and Targeting system.
2. Give any four bench marking parameters followed in equipment/utility related in Industries.
3. Explain the difference between fans, blowers and compressors.
4. Give some applications for Air-Conditioning Systems and Refrigeration Systems.
5. Why automatic control and optimization needed for an energy management system?

PART - B (5 x 14 = 70 Marks)

6. (a) Mention some of the long-term energy strategies available for the better energy secured nation. (14)

Or

- (b) Explain in detail the methodology for conducting a detailed energy audit. (14)

7. (a) With a neat diagram draw the Schematic Presentation of a Steam Production and Distribution System and also explain the energy conservation opportunities in steam systems. (14)

Or

- (b) Discuss about the energy efficiency measures taken for boilers and heat distribution. (14)

8. (a) List out the major components of air compressor. Give the requirements for efficient operation of compressed air Systems. (14)

Or

- (b) How fans are classified with respect to their applications. Discuss about the performance evaluation, design and selection criteria. (14)

9. (a) Discuss about the factors affecting the performance & energy efficiency of refrigeration Plants with their energy saving opportunities. (14)

Or

- (b) Briefly describe the methodology of lighting system with energy efficient replacement options. Asses some good practice to be followed in lightning. (14)

10. (a) Define thermal efficiency of a boiler. Explain the different methods adopted for assessing the boiler efficiency. (14)

Or

- (b) List all the requirements of organizational background desired for energy management motivation and energy action planning. (14)

PART - C (1 x 15 = 15 Marks)

11. (a) Explain in brief the “position of energy manager” and “Energy committee” in an organization? In your own words, explain what do you expect as support from top management. (15)

Or

- (b) What do you understand by CUSUM and how it is useful? What are the steps involved in CUSUM analysis. (15)