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205ME004

Ph.D./M.Sc. (Engg.) by Research Degree Examination, Nov./Dec. 2024

Energy Conservation and Management

Time: 3 hrs. Max. Marks:100

Note: ***Answer any FIVE full questions, choosing ONE full question from each module.***

Module-1

1 a. Explain the rules for efficient energy conservation. **(10 Marks)**
b. Explain the energy conservation schemes and measures. **(10 Marks)**

OR

2 a. Explain the Pinch technology. **(10 Marks)**
b. Discuss the optimizing energy inputs and energy balance. **(10 Marks)**

Module-2

3 Write short notes on :
i) Furnaces
ii) Fans and blowers. **(20 Marks)**

OR

4 Write short notes on :
i) Fluidized bed combustion
ii) Heat exchanger networks. **(20 Marks)**

Module-3

5 a. Describe the types of energy audits. **(10 Marks)**
b. Explain the need of energy consultant. **(10 Marks)**

OR

6 a. Explain the types of depreciation. **(10 Marks)**
b. Explain the SCADA software. **(10 Marks)**

Module-4

7 a. Discuss the laws of illumination. **(10 Marks)**
b. Describe the types of lamps. **(10 Marks)**

OR

8 a. Explain the steps for lighting energy conservation. **(10 Marks)**
b. Discuss the lighting standards. **(10 Marks)**

Module-5

9 a. Explain demand factor and diversity factor. **(10 Marks)**
b. Explain the causes and disadvantages at low power factor. **(10 Marks)**

OR

10 a. Explain the types of consumers and tariffs. **(10 Marks)**
b. Explain the different types of distribution system. **(10 Marks)**

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