

ROLL No:

--	--	--	--	--	--	--	--	--	--	--	--

Total number of pages:[1]
Total number of questions:06

B.Tech. || EE || 8thSem

ENERGY AUDITING AND MANAGEMENT

Subject Code: BTEE-804B

Paper ID:

Time allowed: 3 Hrs

Max Marks: 60

Important Instructions:

- All questions are compulsory
- Assume any missing data

PART A (2×10)

Q. 1. Short-Answer Questions:

All COs

- (a) What is the use of Combustion analyzer?
- (b) Give the advantages of Simple payback period.
- (c) Define Cascaded efficiency.
- (d) Define Volumetric efficiency.
- (e) What is Scroll compressor?
- (f) Define Energy Audit.
- (g) Write the principles of Material and Energy balance.
- (h) What are the advantages of Net Present Value?
- (i) Give the formula to calculate the actual transformer loss, when the load on Transformer is known.
- (j) The utility bill shows an average power factor of 0.42 with an average KW of 827, How much KVAR is required to improve the power factor to 0.92?

PART B (8×5)

Q. 2. List the factors that affect energy in air compressor?

CO4

OR

What are Positive displacement compressor and also classified it's types?

Q. 3. a) What are cost benefits of power factor improvement?

CO2

b) Write the methods to control the voltage fluctuation in transformer?

OR

Write step by step approach for maximum Demand control?

Q. 4. Explain the energy conservation act 2001?

CO1

OR

Explain Energy Audit Instruments?

CO1

- Q. 5. (a) Describe compressed air system components? CO4
(b) Explain Reciprocating Compressor?

OR

Describe Vapour Absorption Refrigeration system? CO4

- Q. 6. Explain Process Flow Chart with suitable example in detail? CO3

OR

A textile dryer is found to consume $4\text{m}^3/\text{hr.}$ of natural gas with a calorific value of 800kJ/mole . If the throughput of the dryer is 60kg of wet cloth per hour, drying it from 55% moisture to 10% moisture, estimate the overall thermal efficiency of dryer taking into account the latent heat of evaporation is 2257kJ/kg . CO3