

Roll No.

Total Pages : 2

BT-8/M-20

38176

ENERGY MANAGEMENT

Paper–ME-418-N

Time Allowed : 3 Hours]

[Maximum Marks : 75

Note : Attempt five questions in all. All questions carry equal marks.

1. What are the different phases involved in site and building surveys? Explain in detail. 15
2. Explain the basic principle of governing HVAC systems. Describe in detail the multi zone HVAC system. 15
3. (a) What are the basic principles of a lighting system? 6
(b) A 415V, 3-phase a.c. motor has a power output of 12.75 kW and operates at a power factor of 0.77 lagging and with an efficiency of 85 percent. If the motor is delta-connected, determine :
 - (i) the power input
 - (ii) the line current and
 - (iii) the phase current. 9

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4. (a) Explain, why dry steam is preferred over wet or superheated steam for industrial process heating. 7
- (b) Explain the energy audit and its analysis for pump sets and compressors. 8
5. Discuss the concept of life cycle costing with an example. 15
6. (a) Discuss the various issues related to the energy storage. 8
- (b) Write a short note on integration of building systems. 7
7. Discuss the role of computers in the energy management and analysis. 15
8. Explain the various elements of Industrial power management. 15