

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech (Ind. Engg. & Mgt.) (Spl. in TQM) (Sem.-7)

**ENERGY MANAGEMENT**

Subject Code : IEM-755

Paper ID : [71702]

Time : 3 Hrs.

Max. Marks : 40

**INSTRUCTIONS TO CANDIDATES :**

1. Attempt All EIGHT questions from SECTION-A carrying TWO marks each.
2. Attempt any SIX out of EIGHT questions from SECTION-B carrying FOUR marks each.

**SECTION-A**

**Q1. Answer briefly :**

- a. What is working principle of solar PV cell?
- b. What do you understand by energy management?
- c. What is power factor?
- d. How can energy be saved in HVAC system?
- e. What are major problems related to use of hydrogen energy?
- f. Write main problems related to biogas plant.
- g. What is energy audit?
- h. What is payback period analysis?

## **SECTION-B**

- Q2. Explain construction and working of a flat plate solar collector.
- Q3. Explain methods of electrical 'load and demand' management.
- Q4. Explain different methods of energy saving in thermal power plants.
- Q5. Explain construction and working of a fuel cell.
- Q6. Explain limitations of renewable energy systems.
- Q7. Explain different methods to store energy.
- Q8. Explain different types of HVAC system.
- Q9. What is the need of energy audit? Explain its methodology for buildings and sites.