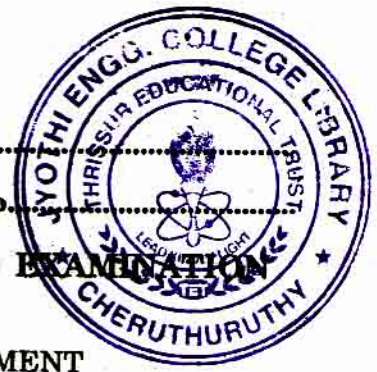


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Name.....

Reg. No.....



**SEVENTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION
OCTOBER 2012**

**ME 09 L25—ENERGY ENGINEERING AND MANAGEMENT
(2009 Admissions)**

Time : Three Hours

Maximum : 70 Marks

Part A

Answer all questions.

- I. (a) What is geothermal energy ?
(b) How is Calorific value of fuel expressed ?
(c) How is wind energy stored ?
(d) What is FBC ?
(e) Mention any *two* costing techniques in energy management.

(5 × 2 = 10 marks)

Part B

Answer any four questions.

- II. (a) Briefly explain various renewable energy sources.
(b) Write short note on energy policies.
(c) What are the objectives of energy surveying.
(d) Explain energy audit.
(e) Briefly explain waste heat recovery system.
(f) Explain energy resource management.

(4 × 5 = 20 marks)

Part C

- III. (a) Explain the various ways by which solar energy is converted to useful form and used for different purposes.

Or

- (b) Write short note on green house effect-global warming.

Turn over

IV. (a) The daily load on a generating station is as follows :

Time (Hours) :	22-05	05-07	07-12	12-13	13-18	18-19	19-21	21-22
Load (MW) :	1000	1500	3000	1500	3500	4500	5000	2500

- (i) Draw the load curve and load duration curve.
- (ii) Calculate load factors and plant capacity factor.

Or

(b) Explain in detail non-conventional energy resource schemes.

V. (a) With neat sketch explain the working of FBC.

Or

(b) Write short note on :

- (i) Wind energy collectors.
- (ii) Heat pump and refrigerators.

VI. (a) Explain in detail various energy management systems.

Or

(b) Briefly explain computerized energy management.

(4 × 10 = 40 marks)