Printed Pages : 1 Roll No. EME065

B.TECH.

THEORY EXAMINATION (SEM–VIII) 2016-17

ENERGY MANAGEMENT

Time : 3 Hours ***Max. Marks : 100***

Note : *Be precise in your answer. In case of numerical problem assume data wherever not provided.*

SECTION – A

1. Explain the following: **10 x 2 = 20**

(a) What do understand by energy index?

(b) What is the regenerator?

(c) What is the energy security?

(d) What is the deference between the renewable and non-renewable energy.

(e) What is the BEE?

(f) Write the advantage of energy management center.

(g) What do you mean by computer aided energy management?

(h) What is the Energy and Exergy?

(i) What are the energy audits?

(j) Write the feature of national energy plan.

SECTION – B

2. Attempt any five of the following questions: **5 x 10 = 50**

(a) What is the energy audit? Discuss different types of energy audit.

(b) What do you understand by energy conservation opportunities (ECOs)? Discuss ECOs in reference to chemical process industry.

(c) Discuss energy conservation in thermal power plants.

(d) What do you understand by energy efficient motors? How power factor effects the energy consumption in electrical machines?

(e) Discuss the effect of CO and SOx on human heath. How we can control the emission of SOx generated from combustion of fuels?

(f) What do you understand by high grade energy? Why heat is called low grade energy?

(g) **Write short notes on the following:**

(i) Life cycle costing

(ii) Demand side energy management.

(h) **Write short notes on the following:**

(i) Thermal energy storage

(ii) Losses in transmission of electrical energy.

SECTION – C

Attempt any two of the following questions: **2 x 15 = 30**

3. What do you understand by regulated and non-regulated emissions? How air quality standards are formulated?

4. What do you understand by green buildings? Discuss energy conservation in air-conditioning of buildings.

5. What do you understand by computer added energy management ? How it leads to better energy conservation?