



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 SO_x on human heath. How we can control the emission of SO_x 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?

