



(Following Paper ID and Roll No. to be filled in your Answer Book)

PAPER ID : 151652

Roll No.

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B. Tech.

(SEM. VI) THEORY EXAMINATION, 2014-15
ENERGY MANAGEMENT

Time : 3 Hours]

[Total Marks : 100

Note : Attempt **all** questions. Assume suitable data, if required.
All questions carry equal marks.

1 Attempt any four parts of the following : 5×4=20

- (a) What are the primary and secondary energy resources ?
- (b) Describe the energy need of growing economy in brief.
- (c) What are the various renewable and non-renewable sources of energy ?
- (d) Write a note on few applications of geothermal energy.
- (e) Define the biomass and biomass energy.
- (f) What is biochemical conversion of biomass and how it is achieved ?

2 Attempt any four parts of the following : 5×4=20

- (a) Explain the conversion of waste biomass into the biogas production.
- (b) Discuss the energy scenario in 21st century.
- (c) Write short note on the energy strategy for future.
- (d) Write short note on the storage of solar energy.
- (e) What do you understand by energy sector reform ?
- (f) What are the hierarchical levels of supply side energy management ?

3 Attempt any two parts of following : 10×2=20

- (a) Discuss the various physical and thermo chemical methods of bioconversion.
- (b) Discuss the role of waste management and recycling of discard material for the conservation of energy.
- (c) Explain the term energy audit. What are the modern techniques and instruments for energy audit ?

4 Attempt any two parts of the following : 10×2=20

- (a) Describe the working of a geothermal power plant with the help of neat sketch. Also discuss the limitations of geothermal energy.
- (b) What is fixed dome-type biogas plant ? Discuss the working with the help of neat sketch.

- (c) Define and explain the following :
- (i) Fusion
 - (ii) Fuel Cell
 - (iii) Energy Efficiency
 - (iv) Per capita energy consumption
 - (v) Energy conservation

5 Attempt any two parts of the following : 10×2=20

- (a) Discuss the various energy conservation measures taken in fertilizer industry.
 - (b) Discuss the various energy conservation measures taken in pulp and paper industry.
 - (c) Discuss the various energy conservation measures taken in alcohol industry.
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