

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

**Paper ID : 151652**

Roll No. 

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**B.TECH.**

**Theory Examination (Semester-VI) 2015-16**

**ENERGY MANAGEMENT**

*Time : 3 Hours*

*Max. Marks : 100*

**Note: Attempt all 3 sections.**

**Section-A**

**1. Attempt all the parts. Write answer of each part in short. (10×2=20)**

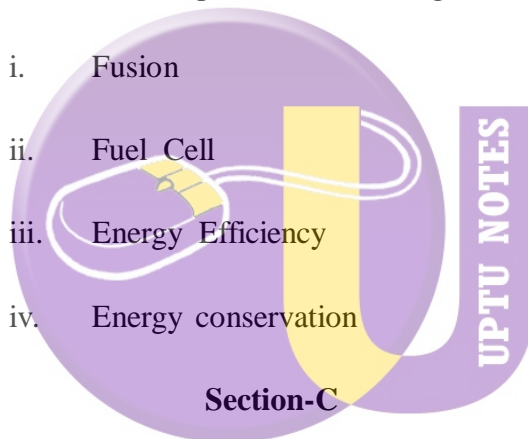
- (a) What are the primary and secondary energy resources?
- (b) Describe the energy need of growing economy.
- (c) What are the various renewable and non-renewable sources of energy?
- (d) Write a note on few applications of geothermal energy?

- (e) Define the biomass and biomass energy.
- (f) What is biochemical conversion of biomass ?
- (g) Discuss the application of geothermal energy.
- (h) What do you understand by energy sector reform?
- (i) Explain the conversion of waste biomass into the biogas production?
- (j) Describe the Per capita energy consumption.

**2. Attempt any five parts of the following. (10×5=50)**

- (a) Describe the energy need of growing economy in brief.
- (b) Discuss the various physical and thermo chemical methods of bioconversion.
- (c) Explain the term Energy Audit. What are the modern techniques and instruments for energy audit?
- (d) Describe the working of a geothermal power plant with the help of neat sketch. Also discuss the application of geothermal energy.

- (e) What is fixed dome-type bio gas plant? Discuss the working with the help of neat sketch?
- (f) Discuss the role of waste management and recycling of discard material for the conservation of energy.
- (g) What are the hierarchical levels of supply side energy management?
- (h) Define and explain the following:



**Note: Attempt any two parts of the following. (15×2=30)**

- 3. Discuss in detail the various energy conservation measures taken in fertilizer industry.
- 4. Discuss in detail the various energy conservation measures taken in pulp and paper industry.

5. Describe the various energy conservation measures taken in alcohol industry.

