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B.Tech.(Electronics & Electrical Engg.) (2012 to 2017 E-III)
B.Tech.(Electrical & Electronics Engg.) (2013 & Onwards E-III)
(Sem.-7)

NON-CONVENTIONAL ENERGY SOURCES

Subject Code : BTEEE-805D

M.Code : 71972

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. **SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.**
2. **SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.**
3. **SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.**

SECTION-A

- 1. Answer briefly :**
- What is the need of non-conventional energy sources? Explain.
 - Explain the term figure of Merit.
 - List the advantages of MHD system.
 - Discuss the principle of MHD generation.
 - What is the significance of solar collector? Explain.
 - What do you mean by solar radiations? Explain.
 - What do you mean by conversion efficiency? Explain.
 - Explain the principle of fuel cell.
 - List the advantages of geothermal energy.
 - What do you mean by tidal energy? Explain.

SECTION-B

2. Explain the limitations of conventional energy. Also discuss the growth of alternative energy sources.
3. Discuss the following :
 - a. Seeback effect
 - b. Peltier effect
 - c. Thomson Effect
4. Discuss the application and economic aspects of MHD generator.
5. Explain the various characteristics of photovoltaic cell. Also discuss the solar energy in India.
6. Discuss the general description and operational characteristics of fuel cells.

SECTION-C

7. Discuss the construction, application and economic aspects of thermo-electric generator. Also write down the properties of thermoelectric materials.
8.
 - a. Explain the basic scheme and application of direct energy conservation.
 - b. Discuss in detail the different aspects of practical MHD generator.
9. Explain the following :
 - a. Wind power
 - b. Biomass energy

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.