

Roll No.

24427

B. Tech. 7th Semester (EE)

Examination – December, 2016

RENEWABLE ENERGY RESOURCES AND TECHNOLOGY

Paper : HUM-459-F

Time : Three Hours]

[Maximum Marks : 100

Before answering the questions, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Question No. 1 (Section-A) is *compulsory*. Attempt *four* more questions from remaining four Sections (B, C, D & E) by selecting at least *one* question from each Section.

SECTION – A

1. (a) Differentiate between conventional and non-conventional energy sources. 5
- (b) Differentiate between generator control and load control. 5
- (c) Explain the prospects of ocean energy in India. 5
- (d) What do you mean by Mini hydro generators ? 5

SECTION – B

2. Explain the environmental aspects of electric energy generation in detail. 20
3. What are the prospects of renewable energy sources in India ? Explain the applications of renewable energy sources. 20

SECTION – C

4. What do you mean by solar radiation estimation ? Explain the principle of conversion of solar radiation into heat. <http://haryanapapers.com> 20
5. Explain the basic principle of wind energy conversion. What are the main points of site selection for wind power plant. Discuss. 20

SECTION – D

6. Classify the biogas materials used in biogas plants. Explain the biomass conversion technology. 20
7. Explain the estimation of geothermal power in detail. What are the main sources of geothermal energy ? 20

SECTION – E

8. Explain the principle and classification of fuel cell in detail. 20

9. What do you mean by thermic power generation ? Explain the fuel cell and management of fuel in detail. 20