

Code: R7410209

B.Tech IV Year I Semester (R07) Supplementary Examinations December 2015

NON-CONVENTIONAL SOURCES OF ENERGY

(Common to EEE & ME)

(For 2008 regular admitted batch only)

Time: 3 hours

Max. Marks: 80

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain the construction and operation of any two instruments used for measuring solar radiation.
(b) Explain the environmental impact of solar power in detail.
- 2 (a) Explain the various configurations for concentrating collectors.
(b) Explain thermal analysis of flat plate collector with necessary equations.
- 3 Write short notes on the following:
(a) Solar pond.
(b) Solar distillation and drying.
- 4 (a) Discuss about the performance curves of wind turbines.
(b) Explain the vertical axis wind mills in detail.
- 5 (a) What are the various advantages of anaerobic digestion?
(b) Draw the combustion characteristics of biogas and explain.
- 6 (a) Discuss about the potential of geothermal energy in India.
(b) Classify the resources of geothermal energy.
- 7 (a) With neat sketch explain the Anderson cycle of OTEC.
(b) Discuss about various configurations of turbines used for tidal energy conversion.
- 8 (a) Explain the principle of MHD generation.
(b) Explain the need for direct energy conversion and also explain the limitations of DEC.
