

Code: 9A03802

R09

B.Tech IV Year II Semester (R09) Regular & Supplementary Examinations April 2016

ENERGY SYSTEMS

(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Explain the working principle of Sunshine recorder.
(b) Write short notes on solar radiation on tilted surfaces.
- 2 How are Flat plate collectors classified? Explain any two types with neat sketch.
- 3 (a) Explain the construction and working of Solar Distillation.
(b) Describe with a neat sketch, Passive Solar Space Heating System.
- 4 Describe with neat sketch of Horizontal Axial machine. List a few advantages and disadvantages.
- 5 (a) Explain briefly about the factors affecting bio-digester of gas.
(b) Explain Chinese Digester with neat sketch.
- 6 What is geothermal source? Explain briefly with its types.
- 7 (a) Write short notes on Wave energy conversion machines.
(b) What are the advantages and limitations of small scale hydro electric power generation?
- 8 Derive an expression for emf of a fuel cell.
