

Code: 9A03802

**R09**

B.Tech IV Year II Semester (R09) Advanced Supplementary Examinations June/July 2016

**ENERGY SYSTEMS**  
(Mechanical Engineering)

Time: 3 hours

Max. Marks: 70

Answer any FIVE questions  
All questions carry equal marks

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- 1 Briefly explain different type of instruments used to measure solar radiation.
- 2 (a) What are the advantages and disadvantages of solar flat-plate and concentrating collector?  
(b) Explain the working principle of evacuated tube collector.
- 3 With the help of neat sketches give the construction and working of evacuated tube collectors.
- 4 Describe with a neat sketch the working of wind energy system with main components.
- 5 (a) Compare anaerobic with aerobic digestion.  
(b) Explain KVIC digester with neat sketch.
- 6 (a) Give brief note on prospect of geothermal energy in context to India.  
(b) Explain hot dry rock resources system with neat sketch.
- 7 With the help of T.S diagram, explain the construction and working principle of closed OTEC cycle.
- 8 Describe on MHD open cycle system with neat sketch.

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