

**SUBJECT CODE NO:- P-288**  
**FACULTY OF ENGINEERING AND TECHNOLOGY**  
**B.E. (EEP/EE/EEE) Examination May/June 2017**  
**Renewable Energy**  
**(Revised)**

[Time: Three Hours]

[Max.Marks:80]

Please check whether you have got the right question paper.

- N.B
- i) Question No 1 and Question No 6 are compulsory
  - ii) Solve from the remaining any two question from each section out of four remaining question in that section ( 2 from section A and 2 from section B)
  - iii) Assume suitable data if required

Section A

- Q.1 Solve any five from the following 10
- a) list any two renewable sources of energy
  - b) Give three types of solar energy collectors
  - c) Define solar energy
  - d) What is meant by pitch angle
  - e) Mention two important wind turbine generator installations in India
  - f) What is called tethering
  - g) Define fuel cell
  - h) Write the function of concentrators
- Q.2 a) What are the prospects of renewable energy sources in India 08
- b) Write the advantages of renewable energy sources 07
- Q.3 a) Explain the principle of conversion of solar energy into heat 08
- b) Why orientation is needed in concentrating type collectors, explain 07
- Q.4 a) Draw the sketch of the horizontal wind mill and list all the parts of it with function of each 08
- b) What do you understand lay aerodynamics, explain 07
- Q.5 a) Write short note on solar cells 07
- b) what are the reasons for variation in the amount of solar energy reaching earth surface 08

Section B

- Q.6 Solve any five from the following 10
- a) what is geothermal power
  - b) Differentiation tide and wave
  - c) What are constitutes of biogas
  - d) Write the function of aerobic digestive
  - e) What is see back thermo electric effect
  - f) Write the various fuel cells
  - g) What is meant lay pyrolysis
  - h) Write the different types of prime movers for Geothermal energy
- Q.7 a) Explain classification of biogas plant 08
- b) Explain the applications of geothermal energy 07
- Q.8 a) Explain the different types of energy that can be generated from ocean 08
- b) Explain the operation of IC engines with biogas and discuss their performance characteristics. 07
- Q.9 a)What are the MHD generators explain its working 08
- b) What are the main application of the gasifier? 07
- Q.10 a) What are the main types of OTEC power plant 08
- b) Write short note on fuel cell 07