

[Total No. of Printed Pages:1]

**CODE NO:- Z-370**

**FACULTY OF ENGINEERING & TECHNOLOGY**

**B.E (EEP/EE/EEE) Year Examination - June- 2015**

**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 Q.No.6 are compulsory.
- ii) Solve any two questions form Q.No.2, 3, 4, 5 and 7, 8,9,10.
- iii) Assume suitable data if necessary.

**SECTION-A**

- Q.1 Solve any five questions. 10
- a) What is the application of solar still?
  - b) What is the maximum energy conversion efficiency of a wind turbine for a given swept area?
  - c) Give the name of gas and its share in biogas having maximum quantity.
  - d) What is gasification of biomass?
  - e) How solar cells are connected in solar panels. Why?
  - f) What are biofuels, explain their heat content.
- Q.2 a) Explain how heat energy can be converted into mechanical energy. 07  
b) Explain the concept of active and passive heating of building. 08
- Q.3 a) Explain the construction of a solar-cell and solar panel with power ratings. Draw VI characteristics of solar cell. 07  
b) Describe the vertical-axis wind machines. 08
- Q.4 a) Explain the concept of wind power density and power in wind stream. 07  
b) Write the advantages and limitations of wind energy conversion. 08
- Q.5 a) Explain the concept of geothermal energy. 07  
b) Write note on thermonic convertor. 08
- SECTION -B**
- Q.6 Attempt any five 10
- a) What is Biomass.
  - b) What is a fuel cell.
  - c) Explain aerobic diagester.
  - d) Whatv are geothermal resources of energy.
  - e) What is Biogas.
  - f) How energy can be genertated through Nuclear fusion.
- Q.7 a) Explain the construction and working of any type of fuel cell. 07  
b) Write the classification and types of fuel cell. 08
- Q.8 a) Explain the working of open cycle type MHD power plant in detail. 07  
b) Explain the principle of MHD generation including hall effect. 08
- Q.9 a) Explain Biomass conversion process with various methods. 07  
b) Explain advanced type of Bio-gas plant with its advantages. 08
- Q.10 a) Explain geothermal power plant. 07  
b) Write note on thermoionic generation. 08