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Total Number of Pages: 02

M.TECH
EEPE208

2ndSem Regular/Back Examination – 2015-16
NON CONVENTIONAL ELECTRICAL ENERGY
Q.CODE:W899
Time: 3 Hours
Max marks: 70

Answer Question No.1 which is compulsory and any five from the rest.
The figures in the right hand margin indicate marks.

- Q1 Answer the following questions: (2 x 10)
- a) What are the various problem and constraints for biogas development?
 - b) Define solar declination.
 - c) Write the Principles of OTEC Systems.
 - d) What is Improved Cook-stoves.
 - e) What is solar pond?
 - f) Write the working principle of Deenbandhu biogas plant.
 - g) What do you understand by geothermal field?
 - h) Distinguish between global radiation and diffuse radiation?
 - i) What is flash pyrolysis fermentation?
 - j) What are the applications of solar energy to space heating?
- Q2 a) Explain how the biomass used as an energy source. (5)
- b) Write the properties and uses of Biogas. (5)
- Q3 a) Write the principles of tidal energy conversion and explain how we can regulate and control the tidal power generation. (5)
- b) Write the application of solar energy to space heating. (5)
- Q4 Draw and explain different types of biogas plant. (10)
- Q5 a) Explain briefly drilling, logging & cementing operations for geothermal wells. (5)
- b) What is wave converter? Briefly explain any two types of wave converter. (5)
- Q6 a) Explain briefly on wind energy development in India. (5)
- b) Explain the characteristics of geothermal resources. (5)

- Q7 a) Briefly explain the various types of bioreactor. (5)
b) Explain the various types of Gasifier. (5)
- Q8 Write Short Notes (Any Two) (5 x 2)
a) Industrial Biomass Combustion Systems
b) Thermal Phase Flow Turbines.
c) Solar Collection Devices
d) Two phase flow turbines.