Total No. of Printed Pages:2

SUBJECT CODE NO:- H-187
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E. (EEP/EE/EEE)
Renewable Energy
(REVISED)

[Time: Three Hours] **[Max.Marks: 80]**

Please check whether you have got the right question paper.

N.B i) Q.No.1 from section A and Q.No.6 from section B are compulsory.
ii) Attempt any two questions from the remaining questions in each section
iii) Assume suitable data, if necessary.

Section A

Q.1 Solve any five. 10

a) What is BTU?
b) How efficiency of the solar cooler con be increased.
c) Which fuel is used in the nuclear reactor?
d) What are wind farms?
e) What is biomass? Is it considered as a steady source of energy?
f) What s biogas?
g) Which insulating materials are used in a solar collector?
h) What is the application of pyrheliometer?

Q.2 a) With neat diagram explain the principle, construction and working of flat plate solar thermal, collector. 08
b) Define solar radiation and explain in details measurement of solar radiation. 07

Q.3 a) Explain wind power generation? What are the advantages of wind power generation? Explain how wind energy is converted into electrical energy. 08
b) Describe vertical axis wind turbine machine. 07

Q.4 a) Write the classification of renewable and non-renewable energy sources in details. 08
b) Explain the principle of photovoltaic cell. Draw VI characteristics of solar cell. 07

Q.5 a) Explain the fuel cells with their electrical characteristics. 08
b) What is thermionic convertor? Explain it in details. 07

Section B

Q.6 Answer any five. 10

a) What is wave energy? And tidal energy?
b) What is geothermal power
c) What is the function of aerobic digestive
d) What is solar dryers
e) What is fuel cell?
f) What is biomass plant?
g) Write the application of biomass energy.

Q.7
a) Explain geothermal energy? Explain the application of geothermal energy. 08
b) What is gasifier? What are the main applications of gasifier? 07

Q.8
a) Explain the various methods of biomass conversion process. 08
b) Explain the advanced type of biogas with its application and advantages. 07

Q.9
a) Explain the OTEC open cycle 08
b) Explain the concept of tidal power generation in details. 07

Q.10
a) Explain the working of open cycle type MHD power plant in details 08
b) What is Hall Effect? Explain the principle of MHD generation. 07