

SUBJECT CODE NO:- P-365
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E.(EEP/EE/EEE) Examination MAY/JUNE-2016
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.
 - iv) Assume suitable data, if necessary.

Section A

- Q.1 Attempt any five 10
- a) List out the renewable sources of energy
 - b) What is Thermionic convertor?
 - c) How solar radiation is measured?
 - d) What is solar still?
 - e) What are factors affecting biogas?
 - f) What is OTEC explain?
 - g) Which material is used to construct solar cell?
- Q.2 a) Explain the principle and working of flat plate solar thermal collector with neat diagram and constructional details. 08
- b) Explain the principle of photo voltaic cell. Draw VI characteristics of a solar cell. 07
- Q.3 a) Explain the concept of active and passive heating of buildings. 07
- b) Explain the construction and working of windmill with neat diagram. 08
- Q.4 a) Derive the equation of total power in the wind stream and explain how it is converted to electric energy. 07
- b) Describe the vertical-axis wind machines. 08
- Q.5 a) What are different renewable and nonrenewable sources of energy explain in details? 07
- b) What is Thermionic convertor? Explain in detail. 08

Section B

- Q.6 Attempt any five 10
- a) What are the different biomass conversion technologies?
 - b) What is biomass?
 - c) What is geothermal gradient?
 - d) What are the types of geothermal power plants?
 - e) What is fuel cell?
 - f) What is Gasifier?
- Q.7 a) Explain the principle of MHD generator. 07
- b) With neat diagram explain open cycle MHD power generation plant. 08

Q.8	a) Explain principle and operation of fuel cell.	07
	b) What are the different types of fuel cells?	08
Q.9	a) Explain biomass conversion process with various methods.	07
	b) Draw neat diagram of Biogas plant and explain it.	08
Q.10	a) What are the applications and problems of Gasifiers?	07
	b) Explain the concept of tidal power generation in detail.	08