

SUBJECT CODE :100
FACULTY OF ENGINEERING AND TECHNOLOGY
B.E. (EEP/EE/EEE) Examination Nov/Dec 2015
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 and Q.No.6 are compulsory.
ii) Solve any two from Q.No.2, 3, 4, 5 and Q.No.7, 8, 9, and 10.
iii) Assume suitable data, if necessary.

SECTION-A

- Q.1 Solve any five 10
a) How the efficiency of the solar cooker can be increased.
b) Explain construction of solar cell.
c) Write the name of fuel used in nuclear reactor
d) Explain the relationship between wind velocity and the power output of an wind generator.
e) What is OTEC explain.
f) Explain energy conversion involved in a tidal power plant.
- Q.2 A What are the advanced solar thermal collectors with neat diagram explain their working. 07
B Write the ratings of a typical single PV cell when exposed to full sunlight. Draw and explain V-I characteristics of a solar cell. 08
- Q.3 A Explain optical design of concentrators and selective coating. 07
B Describe horizontal-axis wind machines. 08
- Q.4 A Explain mean wind velocity, and draw velocity duration curve. 07
B Derive the equation for maximum efficiency of windmill. 08
- Q.5 A What are the various conventional, non conventional, renewable and non renewable sources of energy? 07
B Write note on thermionic convertor. 08

SECTION-B

- Q.6 Attempt any five 10
a) Which are the types of geothermal fluids?
b) What is the photosynthesis?
c) Which are the principal Biomass energy resources?
d) How will you extract energy from tidal waves?
e) What are the applications of biogas?
f) Explain hydrogen fuel cell.
- Q.7 A Explain laser fusion reactor power plant 07
B Write the different types of practical fuel cells and their applications. 08
- Q.8 A Explain the theory of MHD generation. 07
B Explain in detail energy and power in ocean waves. 08
- Q.9 A What are the different methods of biomass conversion? 07
B Draw & explain construction of biogas plant with its application. 08
- Q.10 A Write note on thermoionic generation. 07
B Write note on geothermal sources of energy with applications. 08