**PVP 14**

Code: EE8T1

**IV B.Tech - II Semester - Regular Examinations - March 2018**

# RENEWABLE SOURCES OF ENERGY
# (ELECTRICAL & ELECTRONICS ENGINEERING)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks

11 x 2 = 22 M

1.

a) Define tilt angle.
b) List out environmental impact of solar power.
c) What are the applications of renewable energy?
d) What are the disadvantages of conventional energy sources?
e) Define sensible heat and latent heat.
f) Define vertical axis wind mills.
g) List combustion characteristics of bio-gas.
h) What are the advantages of OTEC energy?
i) What do you understood from tidal energy?
j) Name any two direct energy conversion systems.
k) Define fuel cell.

## PART – B

Answer any ***THREE*** questions. All questions carry equal marks.
3 x 16 = 48 M

2.a) Discuss the working of pyrheliometer. 8 M

b) With neat diagram explain Flat plate collector. 8 M

3.a) Explain about solar heating and cooling process. 8 M

b) Describe the classification of solar cells. 8 M

4.a) Derive the expression for maximum power coefficient (Cp=0.59) 8 M

b) Write about Anaerobic & Aerobic digestion. 8 M

5.a) Explain the setting of OTEC plant. 8 M

b) Enumerate different types of wells. 8 M

6.a) Explain MHD power generation system with neat diagram. 8 M

b) Write merits & demerits of different types of fuel cell. 8 M