

**CERTIFICATE IN ENERGY TECHNOLOGY
AND MANAGEMENT (CETM)**

Term-End Examination

June, 2019

00711

**OEY-002 : RENEWABLE ENERGY
TECHNOLOGIES AND THEIR USES**

Time : 3 hours

Maximum Marks : 70

Note : Attempt any **five** questions. All questions carry equal marks.

1. (a) How is solar radiation calculated on tilted surface ? Explain. 7
- (b) What is hybrid solar cooker ? What are the different factors which should be kept in mind in using solar cooker ? 7
2. (a) Explain the construction and working of simple double effect solar still. 7
- (b) Explain the different designs of non-porous type of solar air heater. 7

3. (a) Write different steps of design process of solar PV power system. 7
- (b) What are the different factors which voltage output of a PV array depends on? 7
4. (a) Explain the construction and working of updraft or counter current gasifier. 7
- (b) How is the size of biogas plant estimated? Explain with the help of any example. 7
5. (a) What are different modes of solar drying techniques? Explain any one. 7
- (b) Explain different cost components of drying unit. 7
6. (a) Explain Trombe wall and Mass wall with operable dampers with neat schematic diagram. 7
- (b) Explain active solar water heater with heat exchanger. Also write the advantages of solar passive systems. 7
7. (a) How can buildings be classified? Also compare each building system. 7
- (b) Describe solar PV power plants. 7