

EMS 1108 - Self Study Course-I

P. Pages : 1

Time : Three Hours



GUG/W/18/1957

Max. Marks : 70

- Notes :
1. All questions carry equal marks.
 2. Answer **any five** questions.
 3. Due credit will be given to neatness and adequate dimensions.
 4. Diagrams should be given wherever necessary.
 5. Illustrate your answers wherever necessary with the help of neat sketches.

1. What do you mean by co-generation and trigeneration? What is the need of co-generation? **14**
2. State a typical energy balance of a Diesel generator (DG) set. How do you assess waste heat recovery potential in a DG set? **14**
3. a) Name the various models of Biogas plant. **7**
b) What are the factors, which affect the size of Biogas Plant. **7**
4. a) How are WEC system classified? Describe in brief. **7**
b) Describe the main consideration in selecting a site for wind generators. **7**
5. Explain PV system sizing with performance, investment, operating cost analysis and pay back calculation of solar system. **14**
6. What are the different types of commercially fuel cell power plants? Draw generalized schematic of a fuel cell power plant. Explain Phosphoric acid fuel cell power plant. **14**
7. Enlist the design criteria and material parameters required for obtaining high short circuit current of solar cells. **14**
8. What plans to reform subsidies have been announced by the Indian Government? Explain. **14**
