22661

12223

3 Hours / 70 Marks Seat No. | | | | | | | | |

Instructions : (1) All Questions are *compulsory.*

(2) Illustrate your answers with neat sketches wherever necessary.

(3) Figures to the right indicate full marks.

(4) Assume suitable data, if necessary.

Marks

1. Attempt any FIVE of the following : **10**

(a) Classify energy sources.

(b) State applications of biofuels.

(c) Enlist the types of panels.

(d) Write specification of HAWT.

(e) Name any four components of Micro-Hydro Power System.

(f) Write merits of PV cells.

(g) Name any four hybrid systems.

2. Attempt any THREE of the following : **12**

(a) Distinguish between Renewable and Non-renewable energy sources.

(b) State the types of Solar Photovoltaic system and explain with the help of schematic diagram.

(c) Draw basic structure of Horizontal axis wind mill and name the components.

(d) Explain micro hydel plant.

3. Attempt any THREE of the following : **12**

(a) Explain working of solar dryer with neat sketch.

(b) Explain stand alone street light system.

(c) Describe the working of fixed dome type biogas plant with neat sketch.

(d) Define biomass & biomass energy. Discuss various biomass resources.

4. Attempt any THREE of the following : **12**

(a) Explain the working of wind solar hybrid system.

(b) Differentiate between HAWT & VAWT.

(c) Explain working of propeller type reaction turbine.

(d) Discuss in detail the preventive maintenance of Hydro power plant and why preventive maintenance is necessary ?

(e) Explain solar biogas hybrid system with neat sketch.

5. Attempt any TWO of the following : **12**

(a) Explain with neat sketch construction and working of flat plate collector.

(b) Explain the installation procedure for Solar roof Top system.

(c) Write in detail the maintenance procedure of large horizontal axis wind turbine.

6. Attempt any TWO of the following : **12**

(a) How the solar dryers are classified and explain any one with neat sketch.

(b) Discuss the technical and commercial feasibility in brief for renewable energy system.

(c) Describe the installation & maintenance procedure of a typical Biogas plant.
