Total No. of Questions—**8**] [Total No. of Printed Pages—**3**

Seat No.	

[4657]-532

S.E. (Electrical) (First Sem.) EXAMINATION, 2014

POWER GENERATION TECHNOLOGIES

(2012 PATTERN)

Time : Two Hours **Maximum Marks : 50**

N.B. **:—** (*i*) Neat diagrams must be drawn wherever necessary.

(*ii*) Figures to the right indicate full marks.

(*iii*) Your answers will be valued as a whole.

(*iv*) Assume suitable data, if necessary.

1. (*a*) Explain the operation of steam power plant with the help of schematic diagram. [7]

(*b*) Discuss the merits and demerits of a gas turbine power plant. [6]

Or

2. (*a*) What are the advantages of reheat cycle ? Explain with the help of schematic and (T-S) diagram. [7]

(*b*) Discuss the advantages and disadvantages of a nuclear plant as compared to other conventional power plants. [6]

P.T.O.

3. (*a*) Explain the working of Pelton turbine with neat diagram in hydro power plant. [6]

(*b*) What methods are used to control the speed of wind turbine generator to achieve maximum power ? [6]

Or

4. (*a*) Compare impulse turbine with reaction turbine in hydro power plant. [6]

(*b*) Describe how the height of wind tower influences the wind power plant working. [4]

(*c*) Explain how wind power plant affects environment. [2]

5. (*a*) Discuss the working of a flat plate collector using air as working fluid with the help of a neat sketch. [6]

(*b*) What is PV system ? What are its advantages and disadvantages ? [7]

Or

6. (*a*) What is paraboloidal dish collector ? Discuss its working with a neat sketch. [6]

(*b*) Explain performance curve of PV cell with the help of I-V curves. Also draw equivalent and simplified circuits for PV cell. [7]

7. (*a*) Write a short note on Ocean Thermal Energy Conversion. [6]

(*b*) Explain Municipal Solid Waste to energy conversion. [6]

Or

8. (*a*) What are the requirements of storage and selection criteria of fuel cell ? [6]

(*b*) Write a short note on Biomass energy conversion to electricity. [6]