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[5252]-542

S.E. (Electrical Engineering) (First Semester)

EXAMINATION, 2017

POWER GENERATION TECHNOLOGIES

(2015 PATTERN)

Time : Two Hours

Maximum Marks : 50

N.B. :— (i) Attempt *all* questions.

(ii) Figures to the right indicate full marks.

(iii) Assume suitable data, if necessary.

1. (a) Explain the operation of steam power plant with the help of schematic diagram. [6]

(b) Explain rankine cycle with PV and TS Diagram. [6]

Or

2. (a) Explain working of Electrostatic precipitator with neat sketch. [6]

(b) With the help of diagram explain the Nuclear power plant. [6]

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

(b) Describe the types of wind turbine electrical generators. [7]

Or

4. (a) Explain the function of the following component in HPP : [6]

(1) Dam

(2) Penstock.

P.T.O.

- (b) Explain how the wind pattern affects power generation in wind energy systems. [7]
5. (a) Explain the impacts of shading on PV system I-V curves. [7]
(b) Explain the methods of measurement of solar radiation. [6]
- Or*
6. (a) Write a short note on Ocean Thermal Energy conversion. [7]
(b) Explain the terms : [6]
(1) Solar Constant
(2) Concentration ratio.
7. (a) Discuss the working of a paraboloidal collector with neat sketch. [6]
(b) Write a short note on biomass energy conversion to electricity. [6]
- Or*
8. (a) Explain flat type solar collector and its application. [6]
(b) Explain grid connected renewable system and their requirements. [6]