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Seat No.

[5668]-151

S.E. (Electrical Engineering) (I Sem.) EXAMINATION, 2019

POWER GENERATION TECHNOLOGIES

(2015 PATTERN)

Time : Two Hours

Maximum Marks : 50

N.B. :— (i) Answer Q. No. 1 or Q. No. 2, Q. No. 3 or Q. No. 4,
Q. No. 5 or Q. No. 6, Q. No. 7 or Q. No. 8.

(ii) Figures to the right indicate full marks.

(iii) Assume suitable data, if necessary.

1. (A) Explain Carnot cycle with PV and TS Diagram. [6]
(B) Explain coal handling system in thermal power plant with neat flow chart. [6]
- Or
2. (A) Explain working of Air-preheater and economiser in thermal power plant and show its location in layout. [6]
(B) With the help of diagram explain the diesel power plant. [6]

3. (A) Explain the following terms with sketches : [6]
(i) Water hammer
(ii) Surge tank
(iii) Spillways.
(B) Derive power in a wind and environmental impacts of Wind Turbines. [6]

P.T.O.

Or

4. (A) Explain hydrograph and flow duration curve with example. [6]
(B) Explain working of vertical type wind turbine with diagram. [6]

5. (A) Explain the process Biomass energy conversion. [6]
(B) Explain the Shading impacts on I-V curves of PV cells. [7]

Or

6. (A) Explain the process of municipal solid waste to energy conversion with diagram. [6]
(B) With the help of diagram explain the main concept of solar thermal power plant. [7]

7. (A) Define the terms in solar energy system : [6]
(i) Solar constant
(ii) Cloudy index
(iii) Concentration ratio.
(B) Explain grid connected renewable systems and their requirements. [7]

Or

8. (A) Explain the working of PV cell and Simplest Equivalent Circuit for a Photovoltaic Cell. [6]
(B) Describe the fuel cells. How are they used for energy storage requirements ? [7]

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