

Roll No .....

**EX-8004 (2) (CBGS)**

**B.E. VIII Semester**

Examination, May 2019

**Choice Based Grading System (CBGS)**

**Power Electronics Converters for Renewable  
Energy**

*Time : Three Hours*

*Maximum Marks : 70*

- Note:* i) Attempt any five questions.  
ii) All questions carry equal marks.

1. Explain the following- 14
  - a) DC - DC Buck Boost Converters
  - b) Bidirectional Converters
2. Explain single phase and three phase inverters with proper circuit diagram and waveforms. 14
3. What is the various Renewable Energy sources? Explain in details any two Renewable Energy sources. 14
4. Explain three phase to single phase and single phase to three phase cyclo-converters with proper circuit diagram and waveforms. 14
5. Explain the working of- 14
  - a) STATCON
  - b) SMPS

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6. Explain the following- 14
  - a) Permanent magnet based generators.
  - b) Synchronous generator with back to back controlled/uncontrolled converters.
7. Explain types of battery in detail. Also explain charging and discharging of battery. 14
8. Explain wind power system in details. Also plot and explain P-V and I-V characteristics for the wind energy. 14

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