

Roll No.....

**EE-8403 (GS)**  
**B.E. VIII Semester Examination, June 2020**  
**Grading System (GS)**  
**EHV AC and DC Transmission**  
**(Elective - IV)**  
**Time : Three Hours**

**Maximum Marks : 70**

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

1. What are the basic principles of a two terminal D.C. link control in steady state?  
OR  
Compare AC and DC Transmission system based on technical and economical aspects.
2. Discuss the problems associated with the harmonics introduced by the HVDC converters. Also explain the characteristics of harmonics.
3. Describe the function of STATCOM using its equivalent circuit and phasor diagram.
4. Explain components of EHV DC system
  - i) Converter circuit
  - ii) Rectifier and inverter values
5. Write short notes on the following:
  - a) SSSC
  - b) TCSR
  - c) HVDC substation
  - d) Filters
6. Why series-shunt controlled is required? Explain UPFC Unified Power Flow Controller with circuit diagram.
7. Why is EHV AC transmission system required? What are the problems associated in EHV AC system?
8. Write short notes on any two of the following:
  - a) Over voltage in transmission system
  - b) Ignition angle control
  - c) Converter analysis Graetz circuit
  - d) Adverse effects

\*\*\*\*\*