

**EE-8403**  
**B.E. VIII Semester Examination, June 2017**  
**EHV AC and DC Transmission**  
**(Elective - IV)**

**Time : Three Hours**

www.rgpvonline.com

**Maximum Marks : 70**

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

1. a) Discuss the importance of EHV DC transmission power system. Give name of few EHV DC system in service.  
b) Explain the advantages and disadvantages of HVDC transmission.
  2. a) What are the basic requirements for the firing pulse generation of HVDC valves? Describe any one method of firing angle control.  
b) Explain the problem associated with A.C. interconnection. How they can be overcome.
  3. a) Explain why it is necessary to use compensation of EHV A.C. lines.  
b) Describe series compensation and list its merits and demerits.
- www.rgpvonline.com
4. a) Explain the concept of FACTS and its applications.  
b) Discuss the problems associated with the harmonics introduced by the HVDC converters. Also explain the characteristics of harmonics.
  5. a) Explain different types of A.C. filters giving their configuration and impedance characteristics.  
b) What do mean by surge impedance of a line? List the factor upon which it depends.
  6. a) Explain the concept of attenuations and distortion in traveling waves.  
b) Explain the parallel operation of HVAC and HVDC system.
  7. a) Describe the constant extinction angle control.  
b) What are the basic principles of a two terminal D.C link control in steady state?
  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
- www.rgpvonline.com

\*\*\*\*\*