

**Electrical Engineering Department**  
**EEL794/EE452N HVDC Transmission**

**Major Test**

Time allowed- 2 hour

Maximum Marks- 60

Answer all questions

- Q.1. State the advantages of fuzzy controller. Explain different stages in a fuzzy controller. Develop a fuzzy controller for HVDC current control. [3+4+3]
- Q.2. What is artificial neural network. Explain the principle of reinforced learned neural network used as a current controller in HVDC system. [5+5]
- Q.3 Explain the principle of operation of an active filter. [5]
- Q.4 What is VDCOL. Why it is required. [5]
- Q.5 Explain the two types of firing schemes used in HVDC system. [10]
- Q.6 What is sub synchronous oscillation. How it is analyzed. How DC link control influences it. [10]
- Q.7 What is single or double commutation failure. Explain with current diagram the maximum duration of conduction of a valve under single failure case. [10]