

Library

B. E. (E) (VII) (REV.)  
HVDC Transmission

28/12/17

Con/5054-07.

(REVISED COURSE)  
(3 Hours)

CD-7083  
[ Total Marks : 100

MASTEN

N.B. : (1) Question No. 1 is compulsory.

(2) Attempt any four questions out of remaining six questions.

1. (a) Write down comparison of AC and DC Transmission. 10  
(b) Explain Single Commutation failure and Double Commutation failure. 10
2. (a) Explain the firing schemes of HVDC valves. 10  
(b) Explain the problems associated with weak AC systems. What are the methods to overcome them? 10
3. (a) What are the causes and effects of faults occurring in a converter station? 10  
(b) Explain the Hierarchical Control structure for a d.c. link. 10
4. (a) What are the classification of HVDC links? Describe each one with neat diagrams. 10  
(b) Describe with waveforms the transfer of current to the bypass valve - 10  
(i) Rectifier operation  
(ii) Inverter operation.
5. (a) Explain with neat diagrams and waveforms the principle of 12 pulse converter. 10  
(b) Explain in brief the starting and stopping of a DC link. 10
6. (a) Explain with neat diagrams the components of HVDC Transmission system. 10  
(b) Explain the influence of AC system strength on AC/DC system interaction. 10
7. (a) Explain the causes of Harmonic generation in HVDC and its effect on the system. 10  
Describe different filters used to eliminate these harmonics.  
(b) Write short notes on : 10  
(i) Mode Stabilization  
(ii) Recent Trends in HVDC.

\*\*\*\*\*