

SECTION-B

2. Explain five limitation of HVDC transmission system.
3. Explain the term extinction angle and its significance in inverter control.
4. Combining the equivalent of the rectifier and inverter, describe the total equivalent circuit of HVDC link.
5. Draw and explain the smoothing reactor AC harmonic filter and DC harmonic filter with an HVDC converter.
6. How the modeling of AC network is done? Explain with one example.

SECTION-C

7. Sketch and explain the configuration of a 12-pulse bridge converter indicating the connections of two 3-phase transformer.
8. A bipolar two terminal HVDC link is delivering 1000 MW at ± 500 Kv at the receiving end. Total losses in DC circuit are 60 MW. Calculate the following :
 - a) Sending end power
 - b) Power in the middle of the line
 - c) Sending end voltage
 - d) Total resistance of DC circuit
9. Write short notes on :
 - a) Rod gaps used as protective devices.
 - b) Ground wires for protection of overhead lines.