

SECTION-B

2. State the merits of HVDC as compared to EHV AC transmission lines for long high-power lines.
3. Sketch a schematic diagram of a 2-terminal bipolar HVDC transmission system and explain its operation.
4. Explain the operation of a 6-pulse bridge converter in HVDC system.
5. Explain the terms delay angle and its significance in rectifier control.
6. Narrate the function of a smoothing reactor in a HVDC system.

SECTION-C

7. Derive expression for power at sending end and receiving end of an HVDC pole in terms of sending end voltage, receiving end voltage and line resistance.
8. Explain converter control characteristics in HVDC system with suitable diagram showing all the essential components.
9. Sketch and explain the configuration of a 12-pulse bridge converter indicating the connections of two numbers of 3-phase transformer. In this context explain the terms 12-pulse converter and smoothing reactor.

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