

- NB:** 1) Question No. 1 is compulsory.
2) Attempt any three questions out of remaining questions.
3) Figures to the right indicate full marks.
4) Assume suitable data if necessary.

1. Solve any four :- 20
- (a) What are the limitation of AC transmission and advantages of HVDC transmission?
 - (b) Explain By-pass valve.
 - (c) Explain causes and consequences of harmonics in HVDC system.
 - (d) What is current margin?
 - (e) What is the need of DC reactor in HVDC?
2. (a) Explain the recent trends in HVDC. 10
(b) Explain with neat diagram and waveform principle of 12-pulse converter. 10
3. (a) Write the note an advantages and disadvantages of Ground Return. 10
(b) Write a note on reactive power comparative in HVDC. 10
4. (a) Explain two methods of EPC (Equidistance Pulse Control). 10
(b) Explain different types of faults in HVDC links. 10
5. (a) Explain commutation failure. 10
(b) Explain converter transformer in detail also explain how different it is from normal power transformer. 10
6. (a) Explain power reversal in HVDC and significance of current margin. 10
(b) Explain with neat diagram different types of HVDC lines. 10
