

Code: R7410205

B.Tech IV Year I Semester (R07) Supplementary Examinations December 2015

HVDC TRANSMISSION

(Electrical & Electronics Engineering)

(For 2008 regular admitted batch only)

Time: 3 hours

Max. Marks: 80

Answer any FIVE questions
All questions carry equal marks

- 1 (a) Write the advantages and disadvantages of HVDC transmission.
(b) Compare AC and DC transmission system based on technical and economical aspects.
- 2 (a) Explain the choice of best circuit for HVDC converters.
(b) What is pulse number and also write the pulse number of different HVDC circuits?
- 3 What are the various methods of converter controls? Explain with neat diagram, the working principle of constant current control.
- 4 (a) Explain reactive power requirement with alternating control strategies.
(b) Explain about different types of AC filters.
- 5 (a) Explain DC load flow.
(b) Explain AC – DC power flow using sequential method.
- 6 (a) Explain how the over voltages occur due to DC side line faults.
(b) Explain corona effect on DC lines also explain radio interference.
- 7 Explain characteristics of harmonics and un-characteristics of harmonics and also explain troubles in harmonics.
- 8 (a) Derive an equation for harmonic voltage and current for single tuned filter and discuss the influence of network admittance.
(b) Explain the design of high pass filters.
