

SUBJECT CODE 8055
FACULTY OF ENGINEERING AND TECHNOLOGY
M.E.(Electrical Power Systems) Examination Nov/Dec 2015
HVDC Transmission
(Revised)

[Time: Three Hours]

[Max. Marks: 80]

“Please check whether you have got the right question paper.”

N.B i) Solve any two questions from each section.

ii) Assume the suitable data, wherever necessary.

SECTION-A

Q.1	a) What are the principle advantages of HVDC system over EHVAC? b) Explain in detail the operation & the analysis of twelve pulse converter.	08 12
Q.2	a) What are the different constraints in the selection of converter configuration? b) Explain in detail the DC link control	08 12
Q.3	a) Explain IPC & EPC schemes for firing angle control in detail b) Explain the sources of harmonics & their adverse effects in HVDC system.	10 10
Q.4	a) Explain current & extinction angle control in HVDC system. b) Explain i) ac filters ii) carrier frequency & RI noise.	10 10

SECTION-B

Q.5	a) What is multi terminal HVDC system? Explain its potential applications in detail. b) Explain the current margin control method in MTDC system.	08 12
Q.6	a) Explain per unit system for dc quantities b) Explain a simplified continuous time model & discrete time model for the converter.	08 12
Q.7	a) Explain converter faults in detail b) Explain the over current protection schemes in HVDC.	10 10
Q.8	Write short notes on i) Multi in feed dc systems. ii) HVDC circuit breaker iii) Earth & sea return	18