

1MPS2 ADVANCED POWER ELECTRONICS

Phase Controlled Converters: Performance measures of single and three-phase converters with discontinuous load current for R, RL and RLE loads. Effect of source inductance for single and three-phase converters.

Chopper-Review of choppers configurations, Steady state analysis of type A Chopper- Minimum and Maximum Currents, Ripple and average load current. Commutation in Chopper Circuits.

Inverters: Performance parameters, voltage control of three phase inverters-Sinusoidal PWM, Third Harmonic PWM, 60 degree PWM and Space Vector Modulation. Harmonic reductions

AC Voltage Controllers: Single and Three Phase AC Controllers. AC Voltage Controller with PWM Control.

Cyclo-converters: Single phase and three phase Cyclo-converters. Reduction in Output Harmonics. Matrix Converter