

RAJASTHAN TECHNICAL UNIVERSITY, KOTA

Lecture Plan

Session:	2015-2016
Semester:	1 st semester
Name of Faculty:	Ashok Kumar Sharma
Department:	Electrical
Course Name and Number:	M.Tech.
Name of Subject (with code):	1MPD2- Advanced Power Electronics
Batch Name/Discipline:	Power Electronics and Electric Drives

Lecture Plan Details		
Lecture No.	Topic to be covered	Remark
L-1	Phase Controlled Converters-Introduction	
L-2	Performance measures of single phase converters With discontinuous load current for R load.	
L-3	Performance measures of single phase converters With discontinuous load current for RL load.	
L-4	Performance measures of single phase converters With discontinuous load current for RLE load.	
L-5	Performance measures of three phase converters With discontinuous load current for R load.	
L-6	Performance measures of three phase converters With discontinuous load current for RL load.	
L-7	Performance measures of three phase converters With discontinuous load current for RLE load.	
L-8	Effect of source inductance for single phase converters.	
L-9	Effect of source inductance for three phase converters.	
L-10	Chopper-Review of choppers configurations	
L-11	Steady state analysis of type A Chopper- Minimum and Maximum Currents.	
L-12	Steady state analysis of type A Chopper- Ripple and average load current.	
L-13	Commutation in Chopper Circuits.	
L-14	Commutation in Chopper Circuits.	
L-15	numerical	
L-16	Inverters: Introduction	
L-17	Performance parameters	
L-18	Performance parameters	
L-19	voltage control of three phase inverters-Sinusoidal PWM	
L-20	voltage control of three phase inverters-Sinusoidal PWM	
L-21	Numerical	
L-22	Third Harmonic PWM	

L-23	Third Harmonic PWM	
L-24	60 degree PWM	
L-25	60 degree PWM	
L-26	Space Vector Modulation	
L-27	Space Vector Modulation	
L-28	Harmonic reductions	
L-29	numerical	
L-30	AC Voltage Controllers: Introduction	
L-31	Single Phase AC Controllers	
L-32	Single Phase AC Controllers	
L-33	Three Phase AC Controllers	
L-34	AC Voltage Controller with PWM Control.	
L-35	AC Voltage Controller with PWM Control.	
L-36	Cyclo-converters: Introduction	
L-37	Single phase Cyclo-converters	
L-38	Three phase Cyclo-converters	
L-39	Reduction in Output Harmonics.	
L-40	Matrix Converter	