



Department of Electrical and Electronics Engineering

Lesson Plan & Work-done Diary for AY:-2026-27, ODD Semester

Course with Code: Power Electronics_BEE503				Faculty: Dr Sathish K R			Semester & Section: 5 th Sem	
Class No.	Date planned (DD/MM)	Topics to be covered	TLP Planned	Class No.	Date of Conduction (DD/MM)	Topics Covered	TLP Executed	Remarks if any deviation
MODULE-1								
1		Applications of Power Electronics	Chalk & Talk	1				
2		Types of Power Electronic Circuits	Chalk & Talk	2				
3		Peripheral effects and Switch characteristics	Chalk & Talk	3				
4		Power Diodes: Introduction and Characteristics	Chalk & Talk	4				
5		Reverse Recovery Characteristics and Types of Diodes	Chalk & Talk	5				
6		Power Diode operations on RL circuit	Chalk & Talk	6				
7		Freewheeling Diodes with switched RL Load	Chalk & Talk	7				
8		Diode Rectifiers: Single-Phase Full-Wave Rectifiers	Chalk & Talk	8				
9		Single-Phase Full-Wave Rectifier with RL Load	Chalk & Talk	9				
10		Single-Phase Full-Wave Rectifier with Highly Inductive Load	Chalk & Talk	10				



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MODULE-2								
11		Power Transistors: Introduction	Chalk & Talk	11				
12		Power MOSFETs steady-state Characteristics	ICT	12				
13		Power MOSFET Switching Characteristics	ICT	13				
14		Bipolar Junction Transistors Steady-State Characteristics	ICT	14				
15		Bipolar Junction Transistors Switching Characteristics	Chalk & Talk	15				
16		Switching Limits and IGBTs	Chalk & Talk	16				
17		MOSFET Gate Drive	Chalk & Talk	17				
18		BJT Base Drive	ICT	18				
19		Isolation of Gate and Base Drives	Chalk & Talk	19				
20		Pulse Transformers and Opto-couplers	Chalk & Talk	20				



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MODULE-3								
21		Thyristors: Introduction and Characteristics	Chalk & Talk	21				
22		Two-Transistor Model of Thyristor	ICT	22				
23		Thyristor Turn-On and Turn-Off	Chalk & Talk	23				
24		Types of Thyristors	Chalk & Talk	24				
25		Series and Parallel Operation of Thyristors	Chalk & Talk	25				
26		di/dt Protection	ICT	26				
27		dv/dt Protection	Chalk & Talk	27				
28		DIACs	ICT	28				
29		Thyristor Firing Circuits	Chalk & Talk	29				
30		Unijunction Transistor	Chalk & Talk	30				



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MODULE-4								
31		Controlled Rectifiers: Introduction	Chalk & Talk	31				
32		Single-Phase Full Converters	ICT	32				
33		Single-Phase Dual Converters	Chalk & Talk	33				
34		Three-Phase Full Converters	ICT	34				
35		Three-Phase Dual Converters	Chalk & Talk	35				
36		AC Voltage Controllers: Introduction	ICT	36				
37		Single-Phase Full-Wave Controllers with Resistive Loads	ICT	37				
38		Single-Phase Full-Wave Controllers with Inductive Loads	Chalk & Talk	38				
39		Three-Phase Full-Wave Controllers	Chalk & Talk	39				
40		Practical Issues and Discussion	Chalk & Talk	40				

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MODULE-5								
41		DC-DC Converters: Introduction	Chalk & Talk	41				
42		Step down and Step up chopper with RL Load	Chalk & Talk	42				
43		Performance Parameters of DC-DC Converters	Chalk & Talk	43				
44		DC-DC Converter Classification	ICT	44				
45		DC-AC Converters: Introduction	Chalk & Talk	45				
46		Single Phase Bridge Inverters	Chalk & Talk	46				
47		Three-Phase Bridge Inverters	ICT	47				
48		Voltage Control of Single Phase Inverters	ICT	48				
49		Harmonic Reduction	Chalk & Talk	49				
50		Current Source Inverters	Chalk & Talk	50				