



SNS COLLEGE OF TECHNOLOGY

(An Autonomous Institution)

INTERNAL ASSESSMENT EXAMINATION-I
ACADEMIC YEAR 2022-23



FOURTH SEMESTER

B.E –ELECTRICAL AND ELECTRONICS ENGINEERING

19EET301 / POWER ELECTRONICS AND DRIVES

TIME : 1 Hour 30 Mins.

Max.Marks : 50

PART – A(5 x 2 = 10 MARKS)
ANSWER ALL QUESTIONS

1		What is the difference between diode and SCR	CO1	REM
2		Name the current control power electronic devices	CO1	REM
3		Draw the switching characteristics of power diode	CO1	UND
4		Compare IGBT and MOSFET	CO1	UND
5		Draw the circuit of two pulse converter	CO2	UND

PART – B (2 x 13 = 26 MARKS)
ANSWER ALL QUESTIONS

6	a)	Outline the operation of BJT with structure, circuit, VI characteristics and switching characteristics	CO1	UND
		(OR)		
	b)	Summarize the structure, circuit, VI characteristics and switching characteristics of a SCR with neat diagram	CO1	UND
7	a)	Organize the circuit and relevant waveforms of two quadrant controlled rectifier and discuss it	CO2	APP
		(OR)		
	b)	Construct with a neat circuit diagram , the operation of a six pulse converter	CO2	APP

PART – C (1 x 14 = 14 MARKS)
ANSWER ALL QUESTIONS

8	a)	(i) Show the inter-disciplinary nature of power electronics (ii) Infer the characteristics required for an ideal power electronic device	CO1 (7+7)	UND
		(OR)		
	b)	Construct the structure, circuit, VI characteristics and switching characteristics of a MOSFET	CO1	APP

*****Good Luck*****



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B

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PART – A(5 x 2 = 10 MARKS)
ANSWER ALL QUESTIONS

1		What is n+, n-, p+, p- layers in semi conductor	CO1	REM
2		Name the voltage control power electronic devices	CO1	REM
3		Draw the switching characteristics of BJT	CO1	UND
4		Compare BJT and MOSFET	CO1	UND
5		Draw the circuit of four pulse converter	CO2	UND

PART – B (2 x 13 = 26 MARKS)
ANSWER ALL QUESTIONS

6	a)	Outline the operation of MOSFET with structure, circuit, VI characteristics and switching characteristics	CO1	UND
		(OR)		
	b)	Summarize the structure, circuit, VI characteristics and switching characteristics of a Power diode with neat diagram	CO1	UND
7	a)	Organize the circuit and relevant waveforms of one quadrant controlled rectifier and discuss it	CO2	APP
		(OR)		
	b)	Construct with a neat circuit diagram and waveform , the operation of a single phase semi converter connected with RL load	CO2	APP

PART – C (1 x 14 = 14 MARKS)
ANSWER ALL QUESTIONS

8	a)	(i) Show the inter-disciplinary nature of power electronics (ii) Infer the characteristics required for an ideal power electronic device	CO1 (7+7)	UND
		(OR)		
	b)	Construct the structure, circuit, VI characteristics and switching characteristics of a IGBT	CO1	APP

*****Good Luck*****

