Q.P. Code: 18EE2113 **R18**

Reg. No. | | | | | | | | | | |

SIDDHARTH INSTITUTE OF ENGINEERING & TECHNOLOGY::PUTTUR
(AUTONOMOUS)
M.Tech I year II Semester Regular Examinations June 2019
DIGITAL CONTROL OF POWER ELECTRONIC AND DRIVE SYSTEMS
(Power Electronics)

Time: 3 hours Max. Marks:60

(Answer all Five Units 5×12=60 Marks**)**

UNIT I

1		Explain the application of numerical methods to solve transients in D.C. switched R-C.	12M
		OR	
2		Explain the application of numerical methods to solve transients in D.C. switched R-L.	12M
		UNIT II	
3	**a**	Discuss the working of diode with R load with AC supply.	6M
	b	Discuss the working of diode with R-L load with AC supply.	6M
		OR	
4		Write about the modeling of SCR and TRIAC in simulation.	12M
		UNIT III	
5	**a**	Explain the electrical machine modeling of DC machine.	6M
	b	Give the simulation diagram of basic electric drives.	6M
		OR	
6		Explain the State space modeling and simulation of linear systems.	12M
		UNIT IV	
7	**a**	Explain the Simulation of single phase uncontrolled rectifiers.	6M
	b	Explain the Simulation of single phase controlled (SCR) rectifiers.	6M
		OR	
8		What are the power factor correction schemes and explain with neat figures?	12M
		UNIT V	
9		Explain in detail the Simulation of thyristor choppers with voltage commutation schemes.	12M
		OR	
10		Explain Pulse-width modulation methods for voltage control and Waveform control.	12M

*****END*****