

Reg.No. _____



Karunya UNIVERSITY

(Karunya Institute of Technology & Sciences)
(Declared as Deemed-to-be University under Sec.3 of the UGC Act, 1956)

End Semester Examination – Nov/Dec – 2016

Code : **14EE3002**
Sub. Name : **Power Converter Analysis-I**

Semester : **2016-17 ODD**
Duration : **3hrs**
Max. marks : **100**

ANSWER ALL QUESTIONS (5 x 20 = 100 Marks)

Q. No.	Sub Div.	Questions	Course Outcome	Marks
1.	a.	Draw and explain the operation of full wave rectifier with RLE load. Also derive the output equations.	CO1	20
(OR)				
2.	a.	Explain the working of two pulse midpoint rectifier and derive the output equations with RL load. Also mention the limitation of one pulse rectifier.	CO1	15
	b.	Define the input current distortion factor.		5
3.	a.	Discuss the role of freewheeling diode in semi converter with suitable waveforms.	CO1	10
	b.	Discuss the operation of three phase semi converter with RL load.	C02	10
(OR)				
4.	a.	With neat sketch write about the operation of single phase dual converter.	C02	20
5.	a.	Derive the performance parameters of 2 pulse converters with suitable equations.	C02	15
	b.	Mention the difference between electronics and power electronics.	CO2	5
(OR)				
6.	a.	Discuss the effect of source impedance on the performance of single phase converters.	C03	20
7.	a.	Discuss the working of 12 pulse converter with suitable waveforms.	C03	15
		Define THD.	CO3	5
(OR)				
8.	a.	Draw and explain the operation buck-boost converter with RLE load. Also, list few applications of buck-boost converter.	CO1	20
<u>Compulsory:</u>				
9.	a.	Analyse the performance of four quadrant chopper with RLE load and derive the output equations.	CO2	20

ALL THE BEST