Reg. No.



II SEMESTER M.TECH (PED) MAKE UP EXAMINATIONS, JUNE 2017

SUBJECT: ADVANCED POWER ELECTRONIC CONVERTERS [ELE 5222]

REVISED CREDIT SYSTEM

Time:	3 Hours Date: 22 JUNE 2017	Max. Marks: 50
Instructions to Candidates:		
	 Answer ALL the questions. 	
	 Missing data may be suitably assumed. 	
1 A.	Explain the classification of Power Semiconductor Switches in the four quadr Curve. Give example for each category.	ants of V-I (5)
1 B.	Explain the working of any one fourth order dc-dc converter. Draw the circuit di relevant waveforms.	agram and (5)
2 A.	Derive the Equivalent DC Transformer model of a non ideal boost converter. Co inductor copper loss as a non ideality.	onsider the (5)
2 B.	Explain the evaluation process of a converter design.	(5)
3 A.	Explain the working of a Flyback Converter with the help of circuit diagram an waveforms.	ıd relevant (5)
3 B.	Explain the operation of discontinuous mode in the buck converter. Derive the of voltage gain in discontinuous mode.	expression (5)
4	Derive the small signal model of the boost converter and obtain its transfer fur linear combination of various inputs.	nction as a (10)
5 A.	Explain the generalized closed loop operation of Power Electronic Converter wi of Block Diagram. Illustrate the effect of loop gain on disturbance mitigation.	th the help (5)
5 B.	Draw the circuit diagram and explain the working of ZVS Buck Converter. Draw the relevant waveforms.	(5)