Total	No. (	of Questions : 4] SEAT No. :	
PC.	34	[6360]-34 [Total No. of Pages	:1
T.E. (Electrical Engineering) (Insem)			
POWER ELECTRONICS			
(2019 Pattern) (Semester- I) (303142)			
			•
Time	:1H	Iour] [Max. Marks :	30
Instructions to the candidates:			
	1)	Solve Q1 or Q2; Q3 or Q4.	
	2)	Figures to the right indicate full marks.	
	3)	Neat diagrams must be drawn wherever necessary.	
	<b>4</b> )	Assume suitable data if necessary.	
	5)	Use of non-programmable calculator is allowed.	
<b>Q1</b> )	a) (	Draw & explain switching characteristics of SCR.	[7]
	b) 🕅	Explain four modes of operation of TRIAC.	[8]
		QR	
Q2)	a)	Explain over voltage & over current protections for SCR.	[7]
	b)	Define the following terms in SCR	[8]
		i) Forward break over voltage	
		ii) Latching current	e
		iii) Holding current	N
		iv) I <sup>2</sup> t rating	5
Q3)	a)	Draw VI characteristics of MOSFET & explain its control.	[7]
	b)	Explain Class E chopper feeding RLE load in detail	[8]
		OR OR	
<b>Q</b> 4)	a)	What is time ratio control in dc chopper? Explain the use of TRC f	for
		controlling the output voltage in choppers.	[7]
	b)	Explain with a diagram step up chopper and derive the expression f	or
- C	-	operating at 220 V dc supply. Compute the load voltage if the blocki	15 ng
	1	period of the device is 40 ms	ng [ <b>8</b> ]
			0]
		0.	