GUJARAT TECHNOLOGICAL UNI BE - SEMESTER-V (OLD) - EXAMINATION - SU Subject Code: 150203 Subject Name: Power Electronics & Control Engineeri Time: 02:30 PM to 05:00 PM Instructions:		ment No		
		t Name: Power Electronics & Control Engineering 02:30 PM to 05:00 PM	ΓΙΟΝ – SUMMER 2017 Date: 01/05/20	
	2.	Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.		
Q.1	(a) (b)	Explain the construction and characteristics of the TRIAC.  Explain the different modes of operation of thyristor with the help of its V-I characteristics.		07 07
Q.2	(a)	Define following (i)Holding current in SCR (ii) Latching current in SCR (iii) Threshold voltage (iv) Stack pointer (v) Symbol and V-I Characteristics of DIAC (vi) Strain gauge (vii) Analog and Digital signal.		07
	<b>(b)</b>	Explain speed control of DC motor using SCRs.		07
	<b>(b)</b>	OR Draw & explain torque-speed characteristics of DC motor.		07
Q.3	(a)	Explain the functions of following pins of 8085. (i) Address and Data Bus (ii) Control and status signals (iii) Power supply and clock frequency (iv) serial I/O ports.		07
	<b>(b)</b>	Write a program to find the largest number in array of data using 8085 instructions.		07
Q.3	(a)	OR Explain the following instructions with an example:		07
		LDA, JNC, CNZ, XCHG, RLC, ANA, HLT.		0=
	. ,	Draw and explain pin diagram of 8085.		07
Q.4	(a) (b)	Explain construction and applications of thermocouples and strain gauges.  Write a short note on welding transformers.  OR		07 07
Q.4	(a)	Explain the operation of dielectric heating and list the advantages of dielectric heating.		07
	<b>(b)</b>	Write short note on timers and sequential welding control.		07
Q.5	(a) (b)			07 07
Q.5	(a)	Write short note on Induction motor construction and working p	orinciple.	07
·-	<b>(b)</b>	Draw the block diagram of PLC and describe each block in deta	-	07

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