Seat No.: Enrolment		:: Enrolment No		
		GUJARAT TECHNOLOGICAL UNIVERSITY		
		BE - SEMESTER-VIII (NEW) - EXAMINATION – SUMMER 2017		
Subject Code: 2182410 Date: 04/05/20			)17	
	•	et Name: Digital Signal Controllers(Departmental Elective III)		
		10:30 AM to 01:00 PM Total Marks:	<b>70</b>	
In	3	1. Attempt all questions. 2. Make suitable assumptions wherever necessary. 3. Figures to the right indicate full marks. 4. Notations / symbols used have usual meaning.		
Q.1	(a)	Draw and explain the block diagram of basic generic hardware architecture for	07	
		digital signal processor.		
	<b>(b)</b>	Discuss usage of DSP & DSC in Power Electronics Engineering.	07	
Q.2	(a)	Why one prefer to use DSC in Power supply design?	07	
	<b>(b)</b>	Compare PICOLO and DELFINO Microcontrollers for various aspects in tabular form.	07	
		OR		
	<b>(b)</b>	Discuss functionality of any one C2000 real time Microcontroller.	07	
Q.3	(a)	Explain the code composer studio as Integrated development Environment	07	
	<b>(b)</b>	Describe the Frequency domain sampling & reconstruction of signal in detail.	07	
		OR		
Q.3	(a)	Discuss the Serial Communications Interface (SCI) Modules for DSC.	07	
	<b>(b)</b>	Discuss w.r.t CCS (i) watch window and (ii) project environment.	07	
Q.4	(a)	Enlist various peripherals for DSC 2833X series.	07	
	<b>(b)</b>	Discuss the functional overview of TMS320F28X controller.	07	
		OR		
Q.4	(a)	Discuss register maps for TMS320F28335 controller.	07	
	<b>(b)</b>	Draw and explain the GPIO - Input Timing.	07	
Q.5	(a)	Define and explain the following terms:- (i) Assembler (ii) Macros	07	
	<b>(b)</b>	Write a suitable program for timer interrupt for a controller.	07	
		OR		
Q.5	(a)	Define and explain the following terms:- (i) Assembler directives (ii) linker	07	
	<b>(b)</b>	Write a suitable program for PWM generation for a controller.	07	

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