Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII EXAMINATION - WINTER 2015

•		Code: 172001 Date: 12/12/2015	
_	: 10	Name: Microcontrollers and Embedded Systems 2:30am to 1:00pm Total Marks: 70	
ilisti u	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)		07 07
Q.2	(a) (b)		07 07
	(b)	Write a C Program for PIC18f series microcontroller to generate a ramp signal of 100 Hz frequency using 8 bit DAC.	07
Q.3	(a)	1	07
	(b)	communication.	07
		OR	
Q.3	(a)	Interface an 8 bit ADC with PIC18f. How can you read the data at a sampling rate of 1 Khz.	07
	(b)	Describe how to handle an external interrupt give to a port pin in PIC18f series microcontroller. Discuss how you will write an Interrupt Service Routine in C language.	07
Q.4	(a)		07
	(b)	microcontroller.	07
		OR	
Q.4 Q.4	(a) (b)	For the temperature measurement, show complete interfacing of any temperature sensor. Discuss the stack operations in PIC18f series microcontroller.	
Q.5	(a)	Discuss the requirement of RS232 interface when data is required to be transferred between an 8051 and a personal computer.	07
	(b)	Describe the interfacing of 2x3 matrix keyboard with an 8051. Discuss the programming steps to read the key status.	07
		OR	
Q.5	(a) (b)		07 07