Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E Sem-I Regular Examination January / February 2011

Subject code:710302N

Subject Name: Advance Microcontroller

Date: 01 /02 /2011 **Time: 02.30 pm – 05.00 pm**

Total Marks: 70

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4. **Give all answer for PIC 18F family.**

Q.1	**(a)**	List and explain Bused of PIC 18F family.	**07**
	(b)	i)Write a program to reset the overflow flag in status register	**03**
		ii) write a program to perform logical ANDing between 88H and 45 H and identify the flag register	**04**
Q.2	**(a)**	Explain function of working register, bank select register and status register.	**08**
	(b)	Write a program to generate a square wave of 1 KHz frequency. Clock frequency is 40 KHz.	**06**
		OR	
	(b)	Explain following instruction with one example. i) BTG ii) DECFSZ iii) LFSR ii)	**06**
Q.3	**(a)**	Draw and explain function of PORTA.	**07**
	(b)	Draw and explain internal construction of PORTB.	**07**
		OR	
Q.3	**(a)**	Draw and explain function of PORTB.	**07**
	(b)	Enumerate and explain interrupt sources.	**07**
Q.4	**(a)**	Explain serial data communication of PIC 18F family.	**07**
	(b)	Explain data memory of PIC 18F family.	**07**
		OR	
Q.4	**(a)**	List and explain types of data copy instruction.	**07**
	(b)	Explain program memory of PIC 18F family.	**07**
Q.5	**(a)**	Explain capture, compare and PWM modules in details	**07**
	(b)	Three 16 bit numbers are stored in data registers from 0050 H to 0055H. Store the sum in data registers 0056H and 0057H.(Assume data)	**07**
		OR	
Q.5	**(a)**	Explain features of timer 0 and timer 1.	**07**
	(b)	Subtract two bytes 75H from 25H with suing 2'complement method and compare result with manually calculated status of flag.	**07**

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