

T.E. Electrical VI CBGS
MC & its Application

Q.P. Code : 5020

03-6-15

85

5

(3 Hours)

[Total Marks : 80

- N.B. : (1) Q. no.1 is compulsory
(2) Attempt any three from the rest
(3) Make any suitable assumption wherever required

1. (a) Write the difference between interrupt and polling. 05
(b) Draw and explain the status register of pic 18f microcontroller. 05
(c) Compare the microcontroller with microprocessor. 05
(d) Explain the pipelining feature of PIC architecture. 05
2. (a) Explain the different instruction format used in PIC18F microcontroller. 10
(b) Explain the memory organization (program and data memory) of PIC 18 F 10
microcontroller?
3. (a) What is stack and stack pointer. Explain the instructions associated with them. 10
(b) Which are the different addressing modes of PIC18 microcontroller ? 10
4. (a) Write a program to calculate to generate a square wave of 50 Hz frequency 10
on PORTB using timer 0 in 16 bit mode with the prescaler of 128 and the
internal frequency of 10 MHz
(b) Explain the SPBRG, TXREG and P.CREG registers used in serial 10
communication.
5. (a) Which are the steps taken by microcontroller when interrupt occurs and 10
hence explain the interrupt vector.
(b) Draw and explain the LCD interfacing with PIC microcontroller. 10
6. Write short notes on
(i) Matrix keyboard and seven segment LED interfacing. 10
(ii) ADC interfacing with microcontroller. 10