

Exam.Code:0935  
Sub. Code: 6982

1079  
B.E. (Electrical and Electronics Engineering)  
Fifth Semester  
EE-510: Microcontrollers

Time allowed: 3 Hours

Max. Marks: 50

*NOTE: Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.*

x-x-x

I. Attempt the following:-

- a) Distinguish between Microprocessor and Microcontroller.
- b) Which part of the memory is allocated to SFRs in 8051?
- c) Explain the function of register B in 8051.
- d) What is the function of EA and PSEN pins on 8051?
- e) What is an access bank in PIC18 & what is the size of this bank? (5x2)

#### UNIT – I

- II. a) Discuss 8051 memory.  
b) Twenty numbers are stored in RAM location 50H onwards. WAP to eliminate All the blanks in this set and save the rest at 70H address onwards. (4,6)
- III. a) Discuss the SFRs used in Interrupt process of 8051?  
b) WAP to create a pulse width of 5ms on pin P2.4 Assume crystal frequency to be 11.0592 MHz. (4,6)
- IV. a) WAP to receive the data which has been sent in serial form and send it Out to port 0 in parallel form. Also save the data at Ram location 70H Use Timer 1 in mode 2 and 9600 baud.  
b) Explain LCD interfacing with 8051(only the hardware design). How is the Busy Flag checked? (5,5)

#### UNIT – II

- V. a) Discuss the addressing of Program memory and Data memory in PIC 18  
b) Discuss Stack and Stack Pointer with reference to PIC18 (6,4)

P.T.O.

(2)

VI. a) Specify the expected result in W register of PIC 18 for the instructions

i) MOVLW 0X65

ANDLW 0X76

ii) MOVLW 0X95

XORLW 0XAA

b) Discuss the instruction formation of the CALL instruction.

c) Explain the concept and advantage of Pipelining in PIC18?

(4,3,3)

VII. Write short notes on any three of the following:-

a) Interrupt service Routine

b) Port 0 vs Port 1

c) Address Latch Enable

d) Keyboard Debouncing

(4,3,3)

x-x-x