

Exam.Code:0935
Sub. Code: 6982

1078
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:-
- Distinguish between MOVC and MOVX instruction in 8051
 - What is the frequency of the oscillator for 8051 system and what is the reason for this precise value?
 - Explain the function of the Overflow Flag
 - What is the function of TCON register in 8051?
 - Describe pipelining feature of PIC18 (5x2)

UNIT - I

- II. a) Explain with a block diagram the hardware features of 8051 microcontroller
b) Distinguish between UMP and SJMP instructions. (5,5)
- III. a) Discuss the Ports and their alternative functions in 8051?
b) What are the different types of Timer modes in 8051 and explain the function of The Gate bit in TMOD register. (5,5)
- IV. a) WAP to reject all blank (00) data bytes in a string of 20 data bytes stored at RAM Address 40H onwards and then save at 70H onwards.
b) WAP to generate a square wave of frequency 2 kHz on any one of the port pins Using Timer 0 assuming that the clock frequency of the system is 12 MHz. (5,5)

UNIT - II

- V. a) Discuss the Program Counter and Program Rom Space in 8051.
b) Discuss the conditional and unconditional instructions of PIC18. (5,5)

P.T.O.

(2)

- VI. a) Explain the status flags in PIC 18 and solve the C, DC & Z flags for the following code:
MOVLW 67H
ADDLW 3DH
- b) Briefly discuss the concept behind the design of LCD interface in 8051. (5,5)
- VII. Write short notes on any three of the following:-
- a) Memory of 8051
 - b) PIC File Register
 - c) Macros
 - d) Stepper Motor
- (4,3,3)

x-x-x