

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

- Explain with a block diagram the hardware features of 8051 microcontroller
 - Distinguish between UMP and SJMP instructions. (5,5)
- Discuss the Ports and their alternative functions in 8051?
 - What are the different types of Timer modes in 8051 and explain the function of The Gate bit in TMOD register. (5,5)
- 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.
 - 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

- Discuss the Program Counter and Program Rom Space in 8051.
 - 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:

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MOVLW 67H  
ADDLW 3DH
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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