

Total No. of Questions : 6]

SEAT No. :

P3685

[Total No. of Pages :2

Engg. - 22
T.E (Electrical) (Semester - I)
Advance Microcontroller & its Applications (In Sem.)
(2012 Pattern)

Time :1 Hour]

[Max. Marks :30

Instructions to the candidates :

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume Suitable data if necessary*

UNIT-I

- Q1)** a) Explain RAM organization of PIC 18F458 [6]
b) Explain I/O port pins and multiplexed function of Port A [4]

OR

- Q2)** a) Explain status register of PIC18F458 [6]
b) Write short note on program counter and stack pointer [4]

UNIT-II

- Q3)** a) Explain any three instruction in detail [6]
i) SUBWFB 0x53,W ii) BTFSC PORTB,3 iii) IORLW 0x23
iv) BRA \$ v) SWAPF 0x56
b) Write a program to add two 16 bit numbers which are stored at memory location 0x32,0x33 and 0x51, 0x52 least significant byte is stored at lower address. store Result in 0x61, 0x62. [4]

OR

- Q4)** a) Write a assembly language program to read data from pin 3 port B (RB3) and transfer it to pin 7 of port C(RC7) [6]
b) Write a assembly language program to find the smallest of two number which are stored at 0x50,0x51 and place smaller number in file register location 0x52 [4]

P.T.O.

UNIT-III

- Q5)** a) Explain compiler and simulator [4]
- b) Write assembly language program to toggle all the bits of Port B continuously with some delay. Use timer 0 in 16 bit mode and no pre-scaler to generate maximum delay. XTAL = 10MHz. [6]

OR

- Q6)** a) Explain programming external hardware interrupts in PIC18 microcontroller. [4]
- b) Write assembly language program by using timer0 interrupt to generate square wave on pin RB1. [6]

