

Total No. of Questions : 6]

SEAT No. :

P5078

[Total No. of Pages : 2

T.E./Insem.-626

T.E. (Electrical) (Semester - I)

ADVANCE MICROCONTROLLER & ITS APPLICATIONS

(2015 Pattern)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Answer Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right side indicate full marks.*
- 4) *Assume suitable data if necessary.*

Q1) a) Compare CISC and RISC architectures. **[6]**

b) Write an assembly language program for PIC18f458 microcontroller to load contents of working register to internal data memory location 0x203. **[4]**

OR

Q2) a) Explain Stack organization of PIC18f458 microcontroller. Draw the stack pointer register. **[6]**

b) Explain the function of Program counter and Bank Select Register. **[4]**

Q3) a) Explain the following instruction: **[5]**

i) BSF PORTD, 0,0.

ii) ADDWFC 0x20,0,0.

Note that Generalized formats for above instructions are as follows:

i) BSF f,b,a.

ii) ADDWFC f,d,a.

b) Write an assembly language program for PIC18f458 microcontroller to copy data from PORTB to PORTC. **[5]**

P.T.O.

OR

Q4) a) Explain the SFR's related to I/O Ports of PIC18f458 microcontroller. [5]

b) Write an assembly language program for PIC18f458 microcontroller to add contents of a location 0x200, and 0x201, store result at 0x202. [5]

Q5) a) Write a short note on C data types for PIC 18 microcontroller. [6]

b) Write a program in C to set RB0 bit of PORT B. Assume the crystal frequency to be 10 MHz. [4]

OR

Q6) a) Write a C18 program to toggle all bits of PORT B continuously with a delay of 250 ms. [6]

b) Draw the T0CON register and explain the use of Pre-scalar. [4]

