

Total No. of Questions : 8]

SEAT No. :

P3619

[Total No. of Pages : 2

[4858] - 1045

T.E. (E&TC) (Semester - I)

MICRO CONTROLLER AND APPLICATIONS

(2012 Pattern) (End-Sem.)

Time : 3 Hours]

[Max. Marks : 70

Instructions to the candidates:

- 1) Neat diagrams must be drawn wherever necessary.
- 2) Figures to the right indicate full marks.
- 3) Assume suitable data, if necessary.

- Q1)** a) Compare RISC and CISC Processors. [6]  
b) Explain interrupt structure in 8051 microcontroller. [6]  
c) Explain instruction pipeline flow in pic18F\*\*\*. [8]

OR

- a) Explain Criteria for choosing a microcontroller. [6]
- b) Explain Structure of internal memory organization of 8051. [6]
- c) Explain Data memory organization with details description of GPRs and SFR in PIC 18F458. [8]

- Q3)** a) Explain T1CON and T2CON Register in PIC18F\*\*\*. [8]  
b) Explain Interrupt structure of PIC18F\*\*\*. [8]

OR

- Q4)** a) Draw and explain interfacing of 4\*4 matrix key pad with Pic 18F\*\*\* microcontroller using interrupt. Write code in 'c'. [8]  
b) Explain PWM Generation with Example. [8]

- Q5)** a) Draw and explain interfacing of 12C based RTC with PIC18F\*\*\*. Write a code in C. [10]  
b) Compare SPI and I2C protocol. [8]

OR

P.T.O.

- Q6)** a) Draw and Explain MSSP Structure of PIC18F\*\*. [8]  
b) Draw and explain interfacing of ADC for analog input 0-5V and write a C code. [10]

**Q7)** Design a DC Motor control using PWM. [16]

OR

**Q8)** Design a Digital multimeter to display values on LCD Display. [16]

