T.E. Electrical VI CBSGS
Mc & its Application

QP Code : 584900

(3 Hours) | Total Marks : 80

N.B. : (1) Question no. **1** is **compulsory**
(2) Answer **any three** from the remaining questions.
(3) **Figures** to the **right** indcate **full** marks.

1. Attempt **any Four** questions.
   (a) What are the different interrupt sources? 5
   (b) Write the difference between interrupt and polling. 5
   (c) What is meant by assembler directive, explain any three. 5
   (d) Explain the pipelining feature of PIC architecture. 5
   (e) Explain the CCP module in PIC microcontroller 5

2. (a) Which are the different addressing modes of PIC18 microcontroller? 10
   (b) How the baud rate for serial communication is decided? Explain TXSTA and RCSTA 10
   registers used in serial communication.

3 (a) Explain the concept to copy data between Program memory and Data memory. In 10
   view of this, explain any Four instructions associated with this process.
   (b) Explain the different instruction formats used in PIC18F microcontroller. 10

4. (a) Write a program in C18 using Timer0 to generate a square wave of 200Hz frequency 10
   on PORTB pin RB0. Use 16 bit programming technique with 64 prescaler. The
   internal frequency of microcontroller is 10 Mhz.
   (b) Draw and explain the simple IO device interface (switches and LEDs) with PIC 10
   microcontroller and hence explain IO addressing.

5. (a) What is Global Interrupt Enable (GIE) and PEripheral Interrupt Enable (PEIE) concept 10
   with appropriate logical diagram. Also explain INTCON register.
   (b) Write a program in assembly language to multiply and divide, two 8 bit numbers 10
   using PIC18 microcontroller.

6. (a) Write short notes on **any two** 20
   (i) Matrix keyboard and seven segment LED interfacing.
   (ii) ADC interfacing with microcontroller.
   (iii) Stepper motor interfacing.