T.E Electrical VI CBGS
Mc & its appl^n   14.12.15

QP Code : **6426**

(3 Hours)   [Total Marks : 80

N. B. : (1) Question No. 1 is **compulsory**.
      (2) Attempt any **three** from remaining questions.
      (3) Assume suitable data if required.
      (4) **Figures** to the **right** indicate **full** marks.

1. Solve Any **four** :—   20
    (a) What is the significance of STATUS register in PIC 18F.
    (b) Compare microcontroller verses microprocessor.
    (c) Explain pipeline concept used in PIC 18F.
    (d) List the general features of PIC 18 internally supported peripherals.
    (e) Explain Watch dog timer.

2. (a) Write short note on assembler directives.   10
   (b) Explain parallel port structure of PIC 18F.   10

3. (a) Explain addressing modes of PIC 18F.   10
   (b) Explain memory organization of PIC 18F.   10

4. (a) Explain what steps are taken by microcontroller when interrupt occurs   10
     and also explain how interrupt service routine is executed.
   (b) Explain briefly the architecture of PIC microcontroller.   10

5. (a) Explain different registers of PIC18F associated with serial   10
     communication.
   (b) Explain rotate and branch instructions of PIC18F.   10

6. (i) A switch (SW) is connected to pin RD7 (PORTD.7). Write a program   10
    to monitor the status of SW and perform the following:
      (a) If SW=0, the stepper motor moves clockwise.
      (b) If SW=1, the stepper motor moves counter clockwise.
  (ii) Assuming that XTAL = 10 MHz, write a program to generate a square   10
    wave of 10ms on pin PORTB-3.

MD-Con. 11282-15.