CLASS: T.E. E &TC **SUBJECT: MC**

ROLL NUMBER-32440

EXPT 8: Generation Of PWM signal

```
//  Program for PWM Generation using PIC18F4550.
//  PWM output        :       RC2
#include <p18f4550.h>
#include "vector_relocate.h"

void myMsDelay (unsigned int time)        // Definition of delay subroutine
{
        unsigned int i, j;
        for (i = 0; i < time; i++)                // Loop for itime
                for (j = 0; j < 710; j++);        // Calibrated for a 1 ms delay in MPLAB
}

void main()
{
        TRISCbits.TRISC2 = 0 ;      // Set PORTC, RC2 as output (CCP1)
   TRISDbits.TRISD5 = 0 ;  // Set PORTD, RD5 as output (DCM IN2)
        TRISDbits.TRISD6 = 0 ;      // Set PORTD, RD6 as output (DCM IN1)
        PR2 =     187;        // set PWM Frequency 4KHz
   CCP1CON = 0x0C;        // Configure CCP1CON as PWM mode.
        T2CON = 0x07;                //Start timer 2 with prescaler 1:16
        PORTDbits.RD6 = 1;          // Turn ON the Motor
   PORTDbits.RD5 = 0;
 while(1)       // Endless Loop
        {
                // ----------Duty Cycle 80%-----------
                CCP1CONbits.DC1B0 = 0;
                CCP1CONbits.DC1B1 = 0;
                CCPR1L = 0x96;
                myMsDelay(2000);
```

```
            // ------------------------------------
            // ----------Duty Cycle 60%-----------
            CCP1CONbits.DC1B0 = 0;
            CCP1CONbits.DC1B1 = 1;
            CCPR1L = 0x70;
            myMsDelay(2000);
            // ------------------------------------
            // ----------Duty Cycle 40%-----------
            CCP1CONbits.DC1B0 = 0;
            CCP1CONbits.DC1B1 = 0;
            CCPR1L = 0x4B;
            myMsDelay(2000);
            // ------------------------------------
            // ----------Duty Cycle 20%-----------
            CCP1CONbits.DC1B0 = 0;
            CCP1CONbits.DC1B1 = 1;
            CCPR1L = 0x25;
            myMsDelay(2000);
            // ------------------------------------
        }

}
```