[4658] – 565

Seat No.	

T.E. (E & TC) (Semester – I) Examination, 2014
MICROCONTROLLER AND APPLICATIONS
(2012 Pattern)

Time : 3 Hours Max. Marks : 70

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

1. a) Write a short note on RS232 protocol. **6**

   b) Explain the Timer Mode 2 of 8051. **6**

   c) Draw and explain the Data Memory map of PIC18fxx series. **8**

   OR

2. a) Write short note on : **6**
      a) Assembler
      b) Compiler.

   b) Explain the addressing modes of 8051 with example. **6**

   c) Explain the BOD and Power Down modes of PIC18FXXX. **8**

3. a) Explain PIC18FXXX port structure. **8**

   b) Draw and explain the interfacing of LED with Port D of PIC18FXXX microcontroller. Write C code to blink LED with 1 Sec. delay. **8**

   OR

4. a) Explain different Timer modes and their applications of PIC18XX in detail. **8**

   b) Draw and explain the interfacing of LCD in 8-bit mode with PIC18X microcontroller without busy flag. Write C code to display “S.P.Univ.Pune”. **8**

P.T.O.

5. a) Draw and explain the interfacing of ADC for analog input 0-5 V and write a C code. **10**

   b) Draw and explain 12C protocol of PIC18FXX. **8**

OR

6. a) Draw interfacing diagram and write a program for 12C based RTC with PIC18FXXX. **10**

   b) Draw and explain MSSP structure of PIC18FXX. **8**

7. Design of DAS system for temperature monitoring system (use LM 35 temperature sensor). **16**

OR

8. Design the frequency counter to display frequency on LCD display. **16**

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