

Total No. of Questions : 6]

SEAT No. :

[Total No. of Pages : 2

P23

Oct.-16/T.E./Insem.-22

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

MICROCONTROLLER AND APPLICATIONS

(2012 Pattern)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) *Answer Q1 or Q2, Q3 or Q4, Q5 or Q6.*
- 2) *Neat diagrams must be drawn wherever necessary.*
- 3) *Figures to the right indicate full marks.*
- 4) *Assume Suitable data if necessary.*

Q1) a) Differentiate between microprocessor & microcontroller. [5]

b) Explain the role of microcontroller in Embedded system. [5]

OR

Q2) a) Differentiate between RISC & CISC. [6]

b) Explain the role of Simulator & Emulator as development tool. [4]

Q3) a) Explain RAM organization of 8051. [5]

b) Describe the values to be loaded in TH, TL & TM on register for delay calculations of 1 msec using timer 1 (Assume oscillatory freq. 10MHz.) [5]

OR

Q4) a) Explain following instructions : [6]

i) MOVx ii) JNZ xyz iii) ADDC A,B

b) Explain IE & IP register of 8051. [4]

P.T.O.

- Q5)** a) Compare PIC 10, PIC 12, PIC 16 & PIC 18 series. [5]
b) Explain data memory organization of PIC 18. [5]

OR

- Q6)** a) What are different power down modes in PIC microcontroller? [5]
b) Explain the use of watch dog timer. [5]

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