

Total No. of Questions :6]

SEAT No. :

P56

[Total No. of Pages :2

Oct./ TE/ Insem. - 174

T.E. (Electronics)

MICROCONTROLLERS AND APPLICATIONS

(2015 Pattern) (Semester - I) (304204)

Time : 1 Hour]

[Max. Marks :30

Instructions to the candidates:

- 1) *Attempt Q.1 or Q.2, Q.3 or Q.4, Q.5 or Q.6.*
- 2) *Figures to the right indicate full marks.*

- Q1)** a) Draw and explain port 1 structure of 8051 microcontroller in detail. [6]
b) Compare RISC and CISC processor. [4]

OR

- Q2)** a) Explain different modes of timer in 8051 microcontroller. [6]
b) Explain the following instructions with example [4]
i) `MOVC A,@ A+DPTR`
ii) `DJNZ R0, HERE`

- Q3)** a) Draw LED interfacing diagram to port 1 of 8051 microcontroller. Write ALP to blink LED's. [6]
b) Explain Assembler, Compiler, Debugger and Programmer. [4]

OR

- Q4)** a) Interface 4 digit seven segment multiplex display with 8051 microcontroller. Write ALP to display message "SPPU". [6]
b) Draw and explain block diagram of Digital Storage Oscilloscope. [4]

P.T.O.

Q5) a) Draw interfacing diagram of DAC to 8051 microcontroller. Write ALP to generate triangular waveform. [6]

b) Draw interfacing diagram of Buzzer with 8051 microcontroller. Write ALP to turn ON and OFF Buzzer. [4]

OR

Q6) a) Draw interfacing diagram of Temperature sensor (LM35) with 8051 microcontroller using ADC 0808/0809. Draw the flowchart to display Temperature on LCD. [6]

b) Draw and explain generalized data acquisition system. [4]

