

Total No. of Questions : 4]

SEAT No. :

P-5050

[Total No. of Pages : 1

[6187]-452

T.E. (E & TC) (Insem.)

MICROCONTROLLERS

(2019 Pattern) (Semester - I) (304184)

Time : 1 Hour]

[Max. Marks : 30

Instructions to the candidates:

- 1) Answer Q1 or Q2, Q3 or Q4.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right side indicate full marks.
- 4) Use of Calculator is allowed.
- 5) Assume Suitable data if necessary.

- Q1) a) Draw and explain internal memory organization of 8051. [5]
b) Explain the interrupt structure of 8051 in detail also list vector address of internal & external interrupts. [5]
c) Calculate hexadecimal count to generate delay of 50 msec using Timer 1, mode 1, use clock frequency = 11.0592MHz. [5]

OR

- Q2) a) What are the different modes of operation of serial communication in 8051 Explain SMOD registers? [5]
b) Compare RISC and CISC processor. [5]
c) Enlist various modes of operation of Timer & Explain in details. [5]

- Q3) a) Write embedded C program to display HEX counter on LED connected to port 0. [7]
b) Draw an interfacing diagram of stepper motor and write embedded C program to rotate it clockwise continuously. [8]

OR

- Q4) a) Draw an interfacing diagram to glow the lamp connected to Relay at Port pin P1.1 and write embedded C program to make it ON and OFF. [7]
b) Draw an interfacing diagram of DAC and write embedded C program to generate a triangular wave continuously. [8]

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