

S. B. Roll. No.....

MICRO CONTROLLERS AND EMBEDDED SYSTEMS
5th Exam/ECE/3610/Dec'22
(For 2018 Batch Onwards)

Duration: 3Hrs.

M.Marks:75

SECTION-A

Q1. Do as directed.

15x1=15

- a. How many I/O ports are there in 8051 microcontroller?
- b. What is the function of pin 9 in 8051 microcontroller?
- c. The internal RAM in 8051 microcontroller is _____ bytes.
- d. What is the full form of ALE?
- e. Which directive is used to indicate the beginning of the address?
- f. What is the full form of UART?
- g. The program counter in 8051 microcontroller is of _____ bits.
- h. What is the full form of RISC?
- i. The data bus in 8051 is of _____ bits.
- j. The address bus in 8051 is of _____ bits.
- k. What is the addressing mode of instruction MOV A, R2?
- l. How many timers are present in 8051 microcontroller?
- m. What is the address of TCON sfr?
- n. Which instruction is used to return from the end of subroutine?
- o. Which sfr is used to enable/disable the interrupts?

SECTION-B

Q2. Attempt any six questions.

6x5=30

- i. What is assembler? Explain any two assembler directives.
- ii. What are the features of PIC microcontroller?
- iii. Explain the interfacing of 8051 with 7-segment display.
- iv. Explain the timer modes of 8051.
- v. Explain various interrupts in 8051.
- vi. What are the applications of microcontroller in communication system?
- vii. Explain any two arithmetical instructions of 8051 with example.
- viii. Explain PSW sfr in 8051.

SECTION-C

Q3. Attempt any three questions.

3x10=30

- a. Draw and explain the pin diagram of 8051.
- b. Draw and explain the block diagram of 8051.
- c. Discuss the addressing modes of 8051 with examples.
- d. Draw and explain the interfacing of LCD with 8051.
- e. Explain the memory organization of 8051.