

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

MICROCONTROLLER AND EMBEDDED SYSTEMS
5th Exam/ECE/3610/Jun'2022
(For 2018 Batch Onwards)

Duration: 3Hrs.

M.Marks:75

SECTION-A

Q1. Do as directed.

15x1=15

- a. Specify the number of instructions used in 8051 microcontroller.
- b. Give example of EQU directive.
- c. Which Timer mode is known as split timer mode?
- d. Give the number of SFRs are in 8051 microcontroller?
- e. Define Register addressing mode.
- f. Specify the number of ports in 8051 microcontroller.
- g. How many pins 8051 microcontroller has?
- h. What is the value of On-chip ROM in 8051 microcontroller?

What does following stands for?

- i. LCD
- j. PIC
- k. OTP
- l. TMOD
- m. Which interrupt has highest priority in polling sequence of microcontroller?
- n. Define assembler.
- o. Specify the architecture of PIC microcontroller

SECTION-B

Q2. Attempt any six questions.

6x5=30

- i. Explain Interfacing of keyboard with 8051 microcontroller.
- ii. Give the various applications of 8051 μ C?
- iii. Write a program in assembly language to subtract two 8-bit numbers.
- iv. What is addressing mode and what are its types?
- v. What do you mean by elements of assembler?
- vi. Explain the following assembler directives with example.
ORG END USING
- vii. Write short note on TMOD register.
- viii. Explain working of DAC with pin diagram

SECTION-C

Q3. Attempt any three questions.

3x10=30

- a. Draw pin diagram of 8051 microcontroller and explain function of each pin.
- b. List various Arithmetic instructions and give example of each.
- c. What are the applications of microcontroller in communication system?
- d. Write Short note on any two:
 - i) Assembler directives
 - ii) Interfacing of 7-Segment Display
 - iii) PIC microcontroller.