

Exam.Code:0928  
Sub. Code: 6905

2062

B.E. (Electronics and Communication Engineering)  
Fourth Semester  
EC-402: Microcontrollers and Interfacing

Time allowed: 3 Hours

Max. Marks: 50

**NOTE:** Attempt five questions in all, including Question No. 1 which is compulsory and selecting two questions from each Unit.

x-x-x

- I. Explain the following:-
- MOV C A, @DPTR
  - Explain TCON and IP SFR
  - Explain the initialization and processing of serial port registers
  - Reset Vector and Interrupt Vector
  - How baud rate can be control in 8051 for serial communication? (5x2)

**UNIT - I**

- II. Explain the address decoding process of 8051 and what is the duty cycle of ALE? (10)
- III. Why the divide by two flip flops series is considered for time in 8051? A buzzer is connected to p 1.7 and a debounced switch is connected to P 1.6. Write a program that reads the logic level provided by the switch and sounds the buzzer for 1 second for each 1 to 0 transition detected. (10)
- IV. Explain the interrupts timing and using interrupts, design an 8051 furnace controller that keeps a building at 20°C. (10)

**UNIT - II**

- V. Write a program that continually sends the alphabet (lower case) to the devices attached to the 8051 serial port. (10)
- VI. Explain Data memory organization of PIC 18 microcontroller. (10)
- VII. Discuss the block diagram of PIC 18 series microcontroller in detail. (10)

x-x-x