

Reg. No.

B.E./B.Tech.(Full Time) DEGREE END SEMESTER EXAMINATIONS, NOV/DEC 2011
COMPUTER SCIENCE & ENGINEERING BRANCH
FOURTH SEMESTER
CS9251 – MICROPROCESSORS AND MICROCONTROLLERS
(REGULATION 2008)

18

Time: Three Hours

Max.Marks: 100

PART A (10 x 2 = 20 Marks)

Answer All Questions.

1. List four operations commonly performed by the microprocessor unit.
2. If the clock frequency of 8085 processor is 5MHz, how much time is required to execute an instruction of 7T states?
3. If a physical branch address is 2A230 when (CS) = 2200, what will it be if the (CS) are arranged to 7800?
4. Give the difference between procedures and macros.
5. Discuss the BHE and LOCK signals of 8086.
6. Why a bus arbiter is required in a loosely coupled configuration?
7. What is the use of debounce circuit in 8279?
8. Specify the handshake signals, if port A of the 8255A is set up as an input port in mode 1.
9. Give the purpose of the following 8051 pins:
(i) EA (ii) PSEN
10. Give the difference between the microprocessor and micro controller.

PART – B (5 x 16 = 80 Marks)

- 11 (i) Discuss the internal data operations of 8085 with supportive diagram. (8)
(ii) Discuss the mode 1 operation of 8255 programmable peripheral Interface. (8)
- 12 (a) Discuss the internal organization of the 8086 processor with a neat diagram. (16).
(or)
12 (b) Discuss in detail about the data related and program related addressing modes of 8086. (16)
- 13 (a) Draw and discuss the configuration diagram for the minimum mode operation of 8086.(16)
(or)
13 (b) Discuss the basic system concepts of 8086 associated with the multiprocessor environment. (16).
- 14 (a) Discuss the DMA controller of operation and its interface with the 8085 processor. (16)
(or)
14 (b) Discuss briefly about the 8251-USART. (16)
- 15 (a)(i) Discuss in detail about the special function register present in 8051. (8)
(ii) Write an 8051 ALP to sort an array of given numbers. (8)
(OR)
15 (b) Discuss in detail the internal architecture of an 8051 microcontroller. (16)