Reg. No. : | | | | | | | | | | | | |

Question Paper Code : 52374

B.E./B.Tech. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2017

Fourth Semester

Computer Science and Engineering

CS 2252 – MICROPROCESSORS AND MICROCONTROLLERS

(Common to Information Technology)

(Regulations 2008)

(Also Common to PTCS 2252 – Microprocessors and Microcontrollers for B.E. (Part-Time) Fourth Semester – CSE – Regulations 2009)

Time : Three Hours | Maximum : 100 Marks

Answer ALL questions

PART – A **(10×2=20 Marks)**

1. What is the function of IO/M signal in the 8085 ?
2. Mention the difference between a JMP instruction and CALL instruction.
3. What are Macros ?
4. Give the purpose of code segment registers in 8086.
5. Write the advantages of loosely coupled system over tightly coupled systems.
6. What is the function of NEU in 8087 ?
7. What is Key bouncing ?
8. What is a USART ?
9. State the function of the pin PSEN of 8051.
10. Give the importance of special function registers (SPF) in 8051.

PART – B (5×16=80 Marks)

11. a) Draw the architecture diagram of 8085 microprocessor and explain the bus structure and function of various registers in it. (16)

(OR)

b) i) Explain data transfer and branch instructions of 8085 with example instructions. (8)

ii) Write a ALP for 8085 microprocessor to find the largest element in an array. (8)

12. a) Explain the various addressing modes of 8086 microprocessor with examples. (16)

(OR)

b) Write a short note about the following instructions of 8086 microprocessor :

i) Arithmetic instructions. (5)

ii) Logical and shift and rotate instructions. (6)

iii) Processor control and iteration control instructions. (5)

13. a) Describe the data types used in 8087 numeric data processor and its architecture. (16)

(OR)

b) Explain with block diagram, co-processor and loosely coupled configurations in detail. (16)

14. a) i) Explain the memory and I/O interfacing with 8085. (8)

ii) Explain how the Keyboard is interfaced with the 8085 microprocessor. (8)

(OR)

b) Explain how DMA operation is performed and the function and features of 8237 DMA controller. (16)

15. a) i) Elucidate the architectural features of 8051 microcontroller. (8)

ii) Draw and explain the ADC interfacing using 8051. (8)

(OR)

b) i) Name the interrupt sources of 8051 and explain how interrupts are handled in 8051. (8)

ii) Explain the timers and counters of 8051. (8)