KUMARAGURU
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MCA DEGREE EXAMINATIONS: MAY 2015

(Regulation 2009)

Third Semester

MASTER OF COMPUTER APPLICATIONS

MCA511: Microprocessor and Applications

Time: Three Hours   **Maximum Marks: 100**

Answer all the Questions:-

PART A (10 x 2 = 20 Marks)

1. Is 8085 is an 8-bit or 16-bit processor. Why is it so called?

2. How many memory locations can be addressed by a microprocessor with 14 address lines?

3. What are the logical instructions available in 8086?

4. What are the different flag available in status register of 8086?

5. What is ROM?

6. State the significance of LOCK signal in 8086.

7. Define XLAT instruction used in 8086.

8. When is the 8086 processor in minimum mode?

9. What functions are to be performed to interface the keyboard to a microprocessor?

10. List the special features of Pentium processor.

PART B (5 x 16 = 80 Marks)

11. a) (i)   Draw the pin diagram of 8085 and explain the functions of each pin.   (10)

    (ii) Explain the various addressing modes in 8085 processor.   (6)

(OR)

    b) (i)   Draw and explain programming model of 8085 microprocessor.   (10)

    (ii) Explain the timing diagram of I/O read machine cycle of 8085.   (6)

12. a) (i)   Explain in details about arithmetic and program control instructions of 8086. (10)

    (ii) Write an 8086 program to add two 16-bit numbers in CX and DX and store the   (6)
          result in location 0500H addressed by DI.

b)   Draw the 8086 architectural diagram. Explain the function of the special purpose register.

13. a) (i)   Draw the 8086 pin diagram and explain the function of all the pins.   (10)

        (ii)   Write an 8086 ALP to add two 32 bit numbers.   (6)

(OR)

b) (i)   Draw and explain the bus cycle with ideal and wait states in 8086.   (8)

        (ii)   Write a note on a) EPROM   b) DRAM.   (8)

14. a) (i)   Discuss maximum system mode interface of 8086 with 8288 bus controller.   (8)

        (ii)   Explain how to interface 8086 with RAM memories.   (8)

(OR)

b)   Describe closely coupled multiprocessing system with suitable diagram.

15. a)   Discuss 8279 keyboard display controller and its interface in detail.

(OR)

b) (i)   Explain 8259A Programmable Interrupt Controller with an example.   (8)

        (ii)   Draw and explain the 8254 Programmable Interval Timer   (8)

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