MCA (Sem. - 2nd)

INTRODUCTION TO MICROPROCESSOR

SUBJECT CODE : MCA - 205

Paper ID : [B0110]

[Note : Please fill subject code and paper ID on OMR]

Time : 03 Hours   **Maximum Marks : 60**

Instruction to Candidates:

1) Attempt any one question from each Sections - **A, B, C & D**.

2) Section-E is **Compulsory**.

3) Use of Non-Programmable **Scientific Calculator** is allowed.

Section - A

(1 x 10 = 10)

Q1) With a neat block diagram explain the architecture of an 8085 microprocessor.

Q2) (a) Write an assembly language program in 8085 to find the largest number in a data array.

(b) Discuss the importance of CISC processors. Give examples.

Section - B

(1 x 10 = 10)

Q3) With the neat sketch explain the architecture of an 8086 microprocessor.

Q4) (a) Name the various segment registers and their usage in 8086 processor.

(b) Explain in detail about the 8086 memory banks and the associated signals for byte and word operations.

Section - C

(1 x 10 = 10)

Q5) (a) What are the various logical and string instructions in 8086?

(b) What is the difference between intrasegment and intersegment jump?

Q6) Write an assembly language program to convert ASCII code to 8 bit binary.

Section - D

Q7) Draw the block diagram of a 8237 DMA controller and explain its operation.

Q8) (a) What are the various command words in 8259? Discuss the initialization sequence of 8259.

(b) What are the salient features of arithmetic co-processor?

Section - E

Q9) a) What are the essential elements of a CPU?

b) Give the significance of stack pointer.

c) Define indirect addressing mode and give an example.

d) What are the various status signals used in 8085?

e) What is a three byte instruction? Give example.

f) What is the purpose of CLK signal in an 8086 system?

g) What is the use of HOLD and HLDA signals?

h) What is the function of 8254?

i) What are the signals involved in memory bank selection in 8086?

j) What is the function of status register in DMA?

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