Roll No. ....

Total No. of Questions : 07]   [Total No. of Pages : 02

BCA (Sem. - 3rd)

INTRODUCTION TO MICROPROCESSOR

SUBJECT CODE : BC - 305 (N2)

Paper ID : [B0213]

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

Time : 03 Hours   Maximum Marks : 60

Instruction to Candidates:

1) Section - A is **Compulsory**.

2) Attempt any **Four** questions from Section - B.

Section - A

Q1)   (10 × 2 = 20)

a) What are the essential elements of a CPU?

b) What is the purpose of 'auxiliary carry' flag available in Intel processors?

c) What is the difference between source program and object program?

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

e) What happens in 8086 processor when overflow of quotient occurs during division operation?

f) What is the operation performed by the instruction CBW of 8086? Give an example for its use.

g) Differentiate memory mapped and program controlled I/O.

h) What is meant by software interrupt in 8086?

i) What is the importance of arithmetic coprocessor?

j) What are the priority modes available in 8259 interrupt controller?
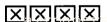
Section - B

(4 × 10 = 40)

Q2) Discuss the operation performed by the following 8085 instructions. Specify the addressing modes used by these instructions.

ADC B, CMP M, DAA and LDA 1234H

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Q3) Discuss in detail about the interrupts and interrupt service routines with interrupt cycle of 8086.

Q4) Write a program in 8086 to perform the following functions :

(a) Load the number 8B H in register D.

(b) Load the number 6F H in register C.

(c) Increment the contents of register C by one.

(d) Add the contents of register C and D and display the sum at output port l.

Q5) (a) With the neat sketch explain the architecture of an 8086 processor.

(b) Give the significance of O Flag, T Flag and I Flag, D Flag of 8086.

Q6) (a) Discuss the operation of 8284 clock generator.

(b) Discuss various operation command words in 8259 interrupt controller.

Q7) What is the use of DMA controller? Explain its operation with neat block diagram.

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