

Roll No.

Total No. of Questions : 13]

[Total No. of Pages : 03

D-6

[2037]

BCA (Semester - 3rd)

INTRODUCTION TO MICROPROCESSOR (BCA-305)

Time : 03 Hours

Maximum Marks : 75

Instruction to Candidates:

- 1) Section A is compulsory.
- 2) Attempt any Nine questions from Section - B.

Section - A

Q1)

(15 x 2 = 30)

- a) Define bit, byte, word and instruction.
- b) Specify the direction of the information flow on the address bus.
- c) What is the significance of data bus and address bus in microprocessor?
- d) How will you execute a program without output port in 8085?
- e) List the four categories of 8085 instructions that manipulate data.
- f) Give two examples of arithmetic instructions in 8085.
- g) Give two examples of logical control instructions in 8086.
- h) Write different addressing modes in 8086.
- i) What is the necessity of using RISC processors?

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- j) Write the role of clock generator in microprocessor.
- k) Give the list of externally initiated operations in 8085.
- l) What is the necessity of using chips like 8087 along with 8086 microprocessor?
- m) Explain the terms SSI, MSI and LSI.
- n) What is the use of flags in 8085?
- o) Which flag is called conditional flag in 8086?

Section - B

(9 x 5 = 45)

- Q2) Draw and explain the block diagram showing how a DMA Controller operates in a microcomputer system.
- Q3) Discuss in brief the important interrupts in 8086.
- Q4) Explain arithmetic and program control instructions of 8086.
- Q5) Give pin configuration, draw and explain the expanded block diagram of 8257.
- Q6) Discuss in detail addressing modes of 8085.
- Q7) Discuss the role of co-processor along with microprocessor taking suitable example.
- Q8) Differentiate between RICS and CICS processors.

- Q9) (a)** Write a machine code for the instruction MOV H, A if the opcode = 01, the register code for H = 100, and the register code for A = 111.
- (b)** Define instruction cycle, machine cycle and T cycle.

- Q10)(a)** What are the advantages of segment register in 8086?
- (b)** Write basic operations of 8086.

Q11) Write and explain the arithmetic instructions of 8086.

Q12) Write and explain the branch instructions used in 8086.

Q13) Write the pin configuration 8085 microprocessor with use of each pin.

