

Dec.-23-0407

EC-402 (Microprocessors & Peripherals) [ECE, CSE, IT]

B.Tech. 4th (CBCS)

Time : 3 Hours

Max. Marks : 60

The candidates shall limit their answers precisely within the answer-book (40 pages) issued to them and no supplementary/continuation sheet will be issued.

Note : Attempt five questions in all, by selecting one question each from of units I, II, III, IV and Question 9 is compulsory.

UNIT - I

1. What are the various 8085 addressing modes? What is their importance? Discuss the addressing modes with examples. Identify the addressing modes of the following instructions:
ANI byte, IN 01, PCHL, CMA, CALL 2200. (10)
2. Discuss
a) Evolution of microprocessor.
b) The main category of 8085 instructions with their examples. (10)

UNIT - II

3. Write an 8085 assembly language program for multiplying two 8 bit binary numbers by shift and add method. (10)
4. (a) What is the difference between hardware and software interrupts? Discuss the use of RST 7.5 and RST 7. (5)
(b) Explain how I/o data transfer takes place with the help of interruption a microprocessor based system. (5)

UNIT - III

5. (a) Explain the difference between serial and parallel I/o data communication. (5)

- (b) Explain 8251 programmable communication interface. (5)
6. Describe the working of 8255 PPI chip and discuss the command byte and three modes of the chip. (10)

UNIT - IV

7. With the help of block diagram, explain the architecture of 8086 microprocessor. (10)
8. (a) What is segmentation? What are its advantages? How is segmentation implemented in a microprocessor?
(b) What are the main features of 8086?
(c) Discuss 8086 minimum mode of operation. (10)

(Compulsory Question)

9. Answer the following:
(a) What is the use of stack?
(b) What is the purpose of clock in a microprocessor?
(c) Explain the difference between instruction, machine and clock cycles.
(d) Explain the difference between instruction and a micro instruction.
(e) List the limitations of 8085.
(f) Differentiate between I/o mapped and memory mapped I/o.
(g) What is the role of DMA controller?
(h) Explain the role of 8087 floating point co-processor.
(i) What do you understand by subroutine?
(j) List the various type of memories used in a microprocessor based system. (10×2=20)