

16130(D) - 0 DEC 2016

B. Tech 5th Semester Examination
Microprocessor Theory and Its Applications (NS)
EC-311

Time : 3 Hours

Max. Marks : 100

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 from each of sections A, B, C, D and Question 9 of Section E which is compulsory. All questions carry equal marks.

SECTION - A

1. Draw the block diagram showing the architecture of 8085 Microprocessor and discuss the role of its important organs. List the various I/O and memory devices used with 8085. (20)
2. What is the importance of addressing modes? Discuss with example the 8085 addressing modes alongwith their applications. (20)

SECTION - B

3. Write 8085 Assembly Language Programs for:
 - (a) Arranging a string of 1000 elements in an ascending order.
 - (b) Finding whether a given number is odd or even. (20)
4. Discuss:
 - (a) I/O mapped I/O and memory mapped I/O.
 - (b) The applications of EI, DI and TRAP. (20)

SECTION - C

5. Describe in detail 8255 PPI chip. (20)
6. Write note on one of the following:
 - (a) DMA controller
 - (b) 8251 (20)

SECTION - D

7. Draw the block diagram showing the architecture of 8086 and discuss it.
8. (a) In what way 8086 is better than 8085? Discuss the limitations of 8086.
(b) List the features of 8088 and 8087.

SECTION - E (Compulsory)

9. Explain the followings:
 - (a) Role of clock in microprocessor.
 - (b) Necessity of the invention of microprocessor.
 - (c) RIM instruction.
 - (d) Role of Assembler.
 - (e) Difference between instruction machine and clock cycles.
 - (f) Role of floating point coprocessor.
 - (g) 8086 minimum and maximum modes of operation.
 - (h) Applications of 8253, 8279.
 - (i) Use of RST 5 instruction.
 - (j) Push H instruction. (2×10=20)