

C 3153

B.E./B.Tech. DEGREE EXAMINATION, MAY/JUNE 2007.

Fourth Semester

Information Technology

CS 1304 — MICROPROCESSORS AND MICROCONTROLLERS

(Regulation 2004)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. When the READY signal of 8085 microprocessor is sampled by the processor?
2. List out the similarities between CALL -RET and PUSH -POP instructions.
3. What is an assembler directives?
4. What is meant by software interrupt in 8086?
5. State the modes in which 8086 operate.
6. What is a segment override prefix? Give an example.
7. List the features of 8251.
8. What is the internal operating frequency of the 8279? How can you derive it from any available clock signal?
9. What is jump range in 8051?
10. What is the function of DPTR register?

PART B — (5 × 16 = 80 marks)

15.

11. (a) (i) Draw the block diagram of 8085 microprocessor and explain. (10)
(ii) Write an assembly language program to add two 2-digit BCD numbers. (6)

Or

- (b) (i) Explain the Instruction set of 8085 in detail with one example in each group. (10)
(ii) Write notes on status flag. (6)
12. (a) (i) Explain the addressing modes of 8086 with the help of examples. (12)
(ii) Write short notes on MACROS. (4)

Or

- (b) (i) Explain the Instruction set of 8086. (8)
(ii) Write an assembly language program in 8086 to find the sum of numbers in the array. (8)
13. (a) (i) Explain the Maximum mode operation of 8086. (12)
(ii) Write notes on addressing memory. (4)

Or

- (b) (i) Explain the Minimum mode operation of 8086. (12)
(ii) Write notes on addressing Input/Output devices. (4)
14. (a) Draw the block diagram of 8279 and explain the functions of each block. (16)

Or

- (b) With a neat diagram, explain how 8251 is interfaced with 8085 and used for serial communication. (16)

15. (a) Describe the architecture of 8051 with neat diagram (16)

Or

(b) (i) Explain the interrupt structure of 8051 (8)

(ii) Write short notes on SFR and Timers (8)

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