

Reg. No. :

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K 3535

M.C.A. DEGREE EXAMINATION, NOVEMBER/DECEMBER 2007.

Third Semester

MC 1702 — MICROPROCESSORS AND ITS APPLICATIONS

(Regulation 2005)

Time : Three hours

Maximum : 100 marks

Answer ALL questions.

PART A — (10 × 2 = 20 marks)

1. List the register set available in 8085.
2. How are the instructions of 8085 classified?
3. Compare 8085 and 8086 flag registers.
4. What are the two modes of operation supported by 8086 architecture? How do you choose the mode of operation?
5. Give the function of the following pins in 8086 (a) Ready (b) ALE.
6. When is a machine cycle initiated? How many T states does each machine cycle contain in 8086?
7. What is the function of the following 80386 pins $\overline{\text{LOCK}}$, $\overline{\text{BE3}}$ – $\overline{\text{BEO}}$?
8. Name and give contents of the new control register in Pentium as compared to 80386 control register.
9. Give the format of program clock word of 8279 and mention its purpose.
10. Mention any two coprocessors and their use.

PART B — (5 × 16 = 80 marks)

11. (a) (i) Draw the Architectural diagram of 8085 and explain. (10)
(ii) Write a detailed note on the Serial I/O control unit of 8085. (6)

Or

- (b) Discuss the complete interrupt structure of 8085 CPU. (16)

12. (a) (i) Give the Instruction format of 8086 and explain the use of the byte addressing mode. (10)
(ii) How is 20 bit physical address generated in 8086 CPU explain with examples? (6)

Or

- (b) List the various addressing modes of 8086 with suitable examples and explain. (16)

13. (a) (i) With a neat sketch explain the memory organization and access of the 8086 processor. (10)
(ii) Draw the memory Write Bus cycle diagram of 8086 working in maximum mode. (6)

Or

- (b) Draw the schematic of the 8086 system working in the maximum mode with all necessary peripheral the components and explain. (16)

14. (a) Describe the 80386 memory management. (16)

Or

- (b) Draw the block diagram of the Pentium processor and discuss the features of the same. (16)

15. (a) Give the Basic description of the 8279 pin configuration and explain how you will interface a 8 digit display and a 64 keys keyboard to the CPU using the 8279. (16)

Or

- (b) Short notes on :
(i) CRT Controller. (8)
(ii) Coprocessor. (8)