

Total No. of Questions—12]

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[3762]-805

S.E. (Information Technology) (II Sem.) EXAMINATION, 2010

MICROPROCESSOR SYSTEMS

(2003 COURSE)

Time : Three Hours

Maximum Marks : 100

- N.B. :—**
- (i) Answer any *three* questions from each Section.
 - (ii) Answers to the two sections should be written in separate books.
 - (iii) Neat diagrams must be drawn wherever necessary.
 - (iv) Figures to the right indicate full marks.

SECTION I

1. (a) Draw functional diagram of 8086 in maximum mode and explain. [12]
- (b) Draw timing diagram of memory. Write cycle for 8086 in minimum mode. [6]

Or

2. (a) Explain pipelining and segmentation used in 8086 in detail. [12]
- (b) Give significance of Ready, Lock and ALE pins of 8086. [6]

P.T.O.

3. (a) Explain the following directives :
(i) DD
(ii) EXTRN
(iii) PUBLIC
(iv) EQU. [8]

- (b) Explain difference between :
(i) Far and Near Procedure
(ii) .EXE and .COM. [8]

Or

4. (a) Explain Immediate and Register addressing mode of 8086. [8]
(b) How MS-DOS is Loaded ? [8]

5. (a) Write short note on IVT of 8086. [8]
(b) Draw interfacing diagram of 8086 with 8259 interrupt controller. [8]

Or

6. (a) Which are different operating modes of Timer 8253/54 Timer ?
Explain any *two* modes in detail. [10]
(b) Explain response of 8086 to an interrupt signal INTR. [6]

SECTION II

7. (a) Draw block diagram of 8255 and explain. [10]
(b) Which are different operating modes of 8255 ? Explain any *one* in detail. [6]

Or

8. (a) Explain difference between Asynchronous and Synchronous communication. [8]
- (b) Draw block diagram of 8251 USART and explain. [8]
9. Explain logical to linear address conversion of 80386 when it is operating in RM and PM. (formats of all required registers is necessary) [18]

Or

10. (a) What is Call Gate ? Explain its significance. [12]
- (b) What is privileged instruction. Give *two* examples. [6]
11. (a) Draw diagram of Pentium Architecture and explain. [12]
- (b) What is IDT ? Which are different descriptors present in IDT. [4]

Or

12. (a) Explain Task switching operation in 80386. [10]
- (b) What is Backlink field ? Explain its significance. [6]