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Total No of Questions: [12] *SEAT NO. :* [ ]

[Total No. of Pages :2]

S.E. 2008 (INFORMATION TECHNOLOGY)
PROCESSOR ARCHITECTURE AND INTERFACING
(Semester - II)

Time: 3 Hours *Max. Marks : 100*

Instructions to the candidates:

1) ***Answer Q.1 or Q.2 , Q.3 or Q.4 ,Q.5 or Q.6 from Section I and Q.7 or Q.8 , Q.9 or Q10 , Q.11 or Q.12 from section II.***
2) ***Answers to the two sections should be written in separate answer books.***
3) ***Neat diagrams must be drawn wherever necessary.***
4) ***Figures to the right side indicate full marks.***
5) ***Assume Suitable data if necessary***

SECTION I

Q1) a) What is Machine Status Word (MSW) of 80386? Draw its format. [8]

b) Differentiate between [10]

1) Memory mapped I/O and I/O mapped I/O.
2) 8086 and 80386

OR

Q2) a) What is the function of BE0 to BE3 Signal? Explain Memory Bank of 80386 processor [8]

b) With the help of block diagram explain the architecture of 80386 processor [10]

Q3) a) What are the components of MS-DOS? Explain in detail [8]

b) Explain any four addressing modes of 80386 by showing physical address generation with the help of example. [8]

OR

Q4) a) Draw and explain control word format for I/O and BSR mode of 8255. [8]

b) Compare and contrast : [8]

i) Procedure and Macro
ii) .COM and .EXE

Q5) a) Draw and explain how 80386 Processor translates Logical address into Linear address. [8]

b) Write down the steps to switch from RM to PM. [8]

OR

Q6) a) Draw and explain how 80386 Processor translates Linear address into Physical address. [8]

b) What is TLB? Why it is necessary? Explain with the help of diagram. [8]

SECTION II

Q7) a) What is multitasking? Explain the process of multitasking with the help of TSS. [10]

b) What is virtual mode? Explain in detail. [8]

OR

Q8) a) Which are the different types of Exceptions in 80386? Explain with suitable examples. [8]

b) How interrupts are handled in protected mode of 80386 Processor? Explain with the help of neat diagram. [10]

Q9)	a)	Explain Data Memory organization of 8051 Microcontroller in detail.	[8]
	b)	Describe different sources of Interrupt and how these interrupts are handled in 8051 Microcontroller.	[8]
		OR	
Q10)	a)	Describe register set of 8051 Microcontroller.	[6]
	b)	Explain different types addressing modes of 8051 Microcontroller with example.	[10]
Q11)	a)	Describe features of Texas MSP 430.	[6]
	b)	Explain in detail Serial port of 8051 Microcontroller with the help of SCON.	[10]
		OR	
Q12)		Explain various modes of Timer of 8051 Microcontroller.	[16]