Duration: 3hrs **Marks: 80**

N.B.: (1) Question No 1 is Compulsory.
(2) Attempt any three questions out of the remaining five.
(3) All questions carry equal marks.
(4) Assume suitable data, if required and state it clearly.

Q1		Attempt any FOUR	[20]
	a	Explain addressing modes of 8086.	
	b	Explain Program Status Word (PSW) register of 8051.	
	c	Explain pipelining feature of 8086 in detail.	
	d	Compare microprocessor and microcontroller.	
	e	Explain physical address generation process in 8086. Calculate physical address by taking suitable DS, CS and IP.	
Q2	a	Draw and explain architecture of 8086 microprocessor.	[10]
	b	Explain following instructions of 8086: CALL DAA	[10]
Q3	a	Write a program to transfer block of data (10 bytes) from DS: 2000H to ES: 4000H using instruction set of 8086.	[10]
	b	Design 8086 microprocessor-based system using minimum mode with following specifications: i) 64 KB EPROM ii) 64 KB RAM	[10]
Q4	a	Write a program to generate a square wave on Port Pin 2.0 using Timer 0 in Mode 1 in 8051.	[10]
	b	Explain serial communication in 8051 using SCON register.	[10]
Q5	a	Explain various operating modes of 8255 PPI.	[10]
	b	Explain the internal RAM organization of the 8051. Highlight the importance of the register banks.	[10]
Q6		Write Short note on	
	a	Interfacing Stepper motor to 8051.	[05]
	b	TMOD register of 8051.	[05]
	c	Maximum mode & minimum Mode of 8086.	[05]
	d	8284 clock generator.	[05]