Paper / Subject Code: 31901 / Microprocessor

Date - 15/11/2019

(Time: 3 Hours) [80 Marks]

N.B. 1) Question No. 1 is compulsory.
2) Attempt any **Three** questions out of remaining.
3) Assume suitable data wherever necessary and state them clearly.

Q.1	a)	Explain memory banking in 8086	5
	b)	Explain VM, RF, IOPL, NT and TF flags of 80386 microprocessor	5
	c)	Write addressing modes of the following instructions	5

        i)   MOV AX, [BX+SI]
        ii)   AND CL,[2000]
        iii)   IN AL, DX
        iv)   JMP [BX+2]
        v)   ADD AX,[BX+SI+5]

	d)	Explain BSR mode of 8255 PPI	5
Q.2	A)	Design 8086 based system for the following requirements	10

        i)   8086 working in minimum mode with 8MHz.
        ii)   64 KB EROM using 32 KB * 8 devices
        iii)   128 KB RAM using 64 KB * 8 devices

	B)	Draw the block diagram of PIC8259 and discuss its operation	10
Q.3	A)	Draw and explain the block diagram of PIT 8253	10
	B)	Draw and explain demultiplexing of address bus in 8086	10
Q.4	A)	Explain how flushing of pipeline problem is minimized in Pentium architecture	10
	B)	Draw and explain maximum mode configuration of 8086 system	10
Q.5	A)	Write a 8086 assembly language program with appropriate comments, to find if the given year is a leap year or not	10
	B)	Explain Strobed Bi-directional I/O Mode 2 operation of 8255 PPI with control word and timing diagram	10
Q.6	A)	Differentiate real mode, protected mode and virtual mode of 80386 microprocessor	5
	B)	Write a short note on mixed language programming	5
	C)	Explain the following instructions in 8086 : LAHF and XLAT	5
	D)	Explain data transfer modes of DMAC 8257	5

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