[Total No. of Printed Pages:1] **CODE NO:- U-131**

FACULTY OF ENGINEERING

S.E (CSE/IT) Examination - DEC - 2014

Microprocessors (Revised)

[Time: Three Hours] **[Max. Marks: 80]**

"Please check whether you have got the right question paper."

N.B 1) Q.No.1 and Q.No.6 are compulsory.
2) Attempt any two questions from Q.2 to Q.5 and from Q.7 to Q.10 of each section.
3) Figures to the right indicate full marks.

SECTION A

Q.1		Attempt any five	10
		a) What is the function of IP?	
		b) Draw memory map of personal computer system.	
		c) What is the function of segment register of 8086?	
		d) Write the function of interrupt flag and TRAP flag of 8086 microprocessor.	
		e) How 8086 generates 20 bit physical address.	
		f) List different data addressing modes of 8086 and explain any one of them.	
		g) Write any two instructions fori) data transfer group ii) Arithmetic group	
		h) Write the function of carry flag &Auxiliary carry flag of 8086.	
Q.2	A)	What are addressing modes? Explain program memory addressing modes.	07
	B)	Explain internal block diagram of 8086 microprocessor.	08
Q.3	A)	Explain rotate and shift instructions.	08
	B)	Write assembly language program to find smallest element from an array of 10 elements.	07
Q.4	A)	a) What are conditional jump instructions? Which flag can be tested by the following jump instructions? Explain i) JNC ii) JNZ iii) JA iv) JO	08
	B)	Write assembly language program for BCD addition and BCD subtraction.	07
Q.5	A)	Explain flag register of 8086.	08
	B)	Explain protected mode in detail.	07

SECTION B

Q.6		Attempt any five	10
		a) What is the need for Bus Buffering and catching?	
		b) What is handshaking mode?	
		c) What is the function of A1 and A0 pins of 8255 PPI.	
		d) Explain the following pins: i) RESET ii) READY	
		e) What is non-maskable interrupt?	
		f) What is the difference between isolated ɔ/0 and memory mapped ɔ/0	
		g) What is the function of lip select pin of 8255 PPI?	
		h) What is flash memory?	
Q.7	A)	Explain different modes of operation of 8254.	07
	B)	Explain mode 1 and mode 2 operation of 8255 PPI with suitable examples.	08
Q.8	A)	Explain following instructions: i) INT 3 ii) BOUND iii) TRET iv) INTO	08
	B)	With suitable diagram explain bus buffering and latching.	07
Q.9	A)	Explain DMA operation in detail.	07
	B)	Explain maximum mode operation of8086 microprocessor with suitable diagram.	08
Q.10	A)	Explain hardware interrupts in detail.	08
	B)	With suitable diagram explain input and output interface.	07

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