Bachelor of Computer Application (B.C.A.-I) First Semester (Old) **1BCA5 - Digital Electronics & Microprocessor Paper - V**

P. F Tin	Pages : ne : Thi	2 ree Hours $* 0 * 0 * *$	GUG/W/18/1094 Max. Marks : 80
	Note	 es: 1. All questions are compulsory and carry equal marks. 2. Draw neat labelled diagram wherever necessary. 3. Avoid vague answers and write answers relevant and specific to 	questions only.
1.		Either	
	a)	What do you mean by number system? Explain Binary and hexadecimal r	number system. 8
	b)	Explain following logic cates with Truth table & symbolic Representationi)NANDii)ANDiii)ORiv)EX-OR	ı. 8
		OR	
	c)	Explain BCD and ASCII codes and Give its advantages and disadvantage	s. 8
	d)	Convert the following decimal numbers into binary. i) $(435)_{10}$ ii) $(1694)_{10}$ iii) $(32)_{10}$ iv) $(135)_{10}$	8
2		Fither	
2.	a)	Explain Half Adder and Full Adder.	8
	b)	State and prove demorgan's theorem. Explain Identities of Boolean Algeb	ra. 8
		OR	
	c)	Explain following in detail.i) Multiplexerii) Half subtractor.	8
	d)	What is K-MAP? Explain K-map for 2 variables in detail.	8
3.	a)	Either Explain construction and working of RSFF flip-flop.	8
	b)	Discuss Johnson counter with their time diagram.	8
		OR	
	c)	Explain construction and working of Asynchronous. Counter.	8
	d)	Write a note on.i) JKRSFFii) TFF.	8
4.	a)	Either Draw and explain Block diagram of 8086 microprocessor.	8
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b) Explain different addressing modes of 8086 microprocessor.

OR

c)	What is Instruction Set? Explain any five Arithmetic Instruction in 8086.	8
d)	Explain processor control in detail	8
	Solve all the questions.	
a)	Write a note on parity and excess 3 binary codes.	4
b)	Explain demultiplexer in short.	4
c)	Explain DFF in brief.	4
d)	Write a note on Assembler directives.	4

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