Enrollment No: _____ Exam Seat No: _____

C.U.SHAH UNIVERSITY Summer Examination-2017

Subject Name : Digital Electronics

	Subject Code : 4CS02DEC1			Branch: M.Sc. C.A. & I.T. (Integrated)					
	Semester	: 2	Date : 06/05/20	17	Time : 02	2:00 To 05	:00 N	/Iarks : 70	
	Instructio (1) U (2) I (3) I (4) A	ns: Jse of Pro nstruction Draw neat Assume su	grammable calcula s written on main a diagrams and figur itable data if neede	tor & any oth nswer book a es (if necessa d.	ner electron are strictly ary) at righ	iic instrum to be obey t places.	ent is prohil ed.	bited.	
Q-1		Attempt	the following que	stions:					(14)
	a)	In Boole (A) 1 (B) 0 (C) -	an Algebra A+A' =	=					1
	b)	(D) M In Boole (E) 1 (F) 0 (G)-	Vone of Above an Algebra A.A' = 1						1
	c)	(H) M In Half A (A) S (B) F (C) S	None of Above Adder Bum, Carry Borrow, Difference Sum, Difference	_ and	are outp	ut.			1
	d)	(D) F In Full S (A) S (B) F (C) S (D) N	ubtractor bum, Carry Borrow, Difference bum, Difference Jone of Above	and	a	re output.			1
	e)	(B) 1 In Half A (A) 2 (B) 2 (C) 2	Adder,2 ,4 ,3	_number of in	nput and _	1	number of (output.	1

(D) None of Above



f)	In Boolean Algebra A+1=	1	
	(A)1		
	(B) 0		
	(C) -1		
	(D)None of Above		
g)	is Input Device.	1	
Ċ,	(A) Keyboard		
	(B) Calculator		
	(C) Printer		
	(D) None of Above		
h)	is Output Device.	1	
)	(A)Keyboard	-	
	(B) Calculator		
	(C) Printer		
	(D) None of Above		
i)	In De'Morgan's law $(AB)'=$	1	
-)	(A) A' + B'	-	
	$(\mathbf{R}) \mathbf{A} \mathbf{B}$		
	$(\mathbf{C}) \mathbf{A} \mathbf{B}'$		
	(\mathbf{D}) None of These		
i)	In AND gate if both input are 1 at that time output is	1	
J)	(A)1	1	
	$(\mathbf{R})0$		
	$(\mathbf{D}) \circ$		
	$(\mathbf{C})^{-1}$		
k)	In OR gate if both input are 0 at that time output is	1	
к)	(A)1	1	
	$(\mathbf{R})1$		
	$(\mathbf{D}) 0$		
	$(C)^{-1}$		
n)	(D) None of Above	1	
1)	(A) NOT	1	
	$(\mathbf{A})\mathbf{N}\mathbf{O}\mathbf{I}$		
	$(\mathbf{D}) \mathbf{A} \mathbf{N} \mathbf{D}$		
	(C) UK (D) None of Above		
)	(D) None of Adove	1	
m)	AND gate is a logical	1	
	(A) SUBTRACTION (D) DIVISION		
	(B) DIVISION		
	(C) MULTIPICATION (D) NONE OF THESE		
	(D) NONE OF THESE	1	
n)	OR gate is a logical	1	
	(A) SUB I KAU HUN		
	(B) DIVISIUN		
	(C) MULTIPICATION (D)NONE OF THESE		
	(D)NONE OF THESE		



Attempt any four questions from Q-2 to Q-8

Q-2		Attempt all questions	(14)			
	(A)	What is Gate? Explain types of gate in brief.	(7)			
	(B)	Explain Half Adder with Diagram and Truth Table.	(7)			
Q-3		Attempt all questions	(14)			
	(A)	Write a note on Full Adder with Diagram and Truth Table.	(7)			
	(B)	Write a note on Full Subtractor with Diagram and Truth Table.	(7)			
Q-4		Attempt all questions	(14)			
C	(A)	Convert Following Decimal Number to Binary				
		(a)(1024)d=()b (b) (624)d=()b				
	(B)	Explain the Block Diagram of Digital Computer.	(7)			
0-5		Attempt all questions	(14)			
×۲	(A)	Draw the Circuit Diagram using gates.	(7)			
		(1) XY'Z'+X'YZ'+XYZ				
		(2) A'C+AB+BC				
	(B)	Prove (AB)'=A'+B' and (A+B)'= A'.B' using Perfect Induction Method.	(7)			
Q-6		Attempt all questions	(14)			
C	(A)	Explain Decoder with Diagram.	(7)			
	(B)	Convert (1) (555) decimal = ()octal	(7)			
		(2) (456) decimal =()octal				
O-7		Attempt all questions	(14)			
L.	(A)	Prove $A+(B+C)=(A+B)+C$ using Perfect Induction Method.	(7)			
	(B)	Write a short note on Half Subtractor.	(7)			
O-8		Attempt all questions	(14)			
•	(A)	What is Product of Sum(POS) and Sum of Product(SOP)? Explain in brief.	(7)			
	(B)	Draw the Circuit Diagram X'Y'Z+XYZ+XZ+XY+YZ using gates.	(7)			
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