

SARDAR PATEL UNIVERSITY

BCA Semester-3 Examination, November- 2022.
US03SBCA21 || DIGITAL COMPUTER ELECTRONICS {NC

	D.	USU3SBCA21 DIGITAL COMPUTER ELECTRONICS {NC}	
		te: 15/11/2022 ;Tu esday ne : 02.00 p.m. — 04.00 p.m.	35
)-1	~ **	Select the appropriate option for the following questions:	05
	1)	The gate has two or more input signals. All inputs must be high to get a high	
	,	output.	
		A. AND C. NAND	•
	2)	B. OR D. NOR	
	2)	In k-map, quad eliminates variable. A. One C. Two	
		B. Three D. Four	
	3)	1 10 11 1375	
		A. carry C. reminder	
	45	B. sum D. none	
	4)	In shift right register, the arrival of the first rising clock edge sets the flip-flop. A. Left C. Up	
		A. Left C. Up B. Right D. Down	
	5)	De Morgan's second theorem says that a NAND gate is equivalent to a	
		A. bubbled AND C. OR bubbled	
		B. bubbled NAND D. bubbled OR	
)-2		Give short answers of the following questions: (ANY FIVE)	10
	1)	Explain NAND, OR gate.	
	2)	Explain Commutative low.	
	3)	Simplify using k-map $F(A,B,C)=E(1,2,5)$	
	4)	Define Flip flop. What is Race condition?	
	5)	What is De-Multiplexer?	
	6)	Differentiate between Half adder and Full adder.	
	7)	Draw circuit diagram of Ripple counter.	
	8)	What is register? Draw circuit diagram of shift right register.	
Q3	A	Explain AND, OR, NOT gates.	05
	В	Explain D flip flop.	05
		OR	
Q 3	A	Explain De morgan's first theorem.	05
	В	Explain 8x3 line Encoder.	05
Q 4	A	Explain 4-bit binary Adder / Subtractor.	06
	В	Explain full adder in detail.	04
		OR	
Q4	A	Explain Comparator with an example.	06
	В	Explain shift left register.	04