PS01CMCA02: Logical Organization of Computers

Assignment 1

Do as directed.	
1.	**Describe following gates by giving truth table and circuit diagram.** 1) Inverters –NOT gate 2) OR gate 3) AND gate 4) NOR gate 5) NAND gate 6) Bubbled OR gate 7) Bubbled AND gate 8) XOR gate 9) XNOR gate
2.	**Define and prove De Morgan's First and Second Laws.**
3.	**Explain sum of product method by taking suitable example.**
4.	**Draw circuit diagram for following.** 1) Decimal to binary encoder 2) 1-0f-10 decoder 3) Odd parity tester 4) Odd parity generator 5) Controlled inverter 6) Word comparator 7) Multiplexers(4-to-1) 8) Nibble Multiplexer 9) Half adder 10) Full adder 11) Binary adder for four digits 12) 2's complement adder subtractor 13) Rs latch using NOR gates 14) RS latch using NAND gates 15) Clocked RS latch 16) D latch 17) Clocked D latch 18) Edge Triggered Latch 19) Buffer registers 20) Controlled buffer registers 21) Shift left and shift right registers 22) Controlled shift registers 23) Shift register with broadside load 24) Ring counter
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