

8. (5 points) We can perform logical operations on strings of bits by considering each pair of corresponding bits separately (called bitwise operation). Given two eight-bit strings $A = 10110001$ and $B = 10101100$, evaluate the eight bit result after a NOR operation.
9. (20 points) Convert decimal +25 and +62 to binary, using the signed-2's-complement representation and enough digits to accommodate the numbers. Then perform the binary equivalent of $(+25) + (-62)$. Convert the answer back to decimal and verify that it is correct.

10. (5 points) Convert $F(A, B, C, D) = \Pi(0, 1, 5, 7)$ to the other canonical form.

11. (10 points) Formulate a weighted binary code for the decimal digits, using weights 5321

12. (10 points) Reduce $A'C' + ABC + AC'$ to three literals.

13. (10 points) Find the complement of $z'(x + (y + z)x')$

14. (20 points) Obtain the truth table of the following function, and express it in sum-of-minterms and product-of-maxterms form:

$$(x' + y + z')(x + y')(x + z)$$