

1. Perform the following arithmetic operations in binary, considering integer, unsigned operands:

a.  $975 + 795$

b.  $975 - 795$

c.  $338 + 211$

d.  $338 - 211$

2. Implement the following functions as Sum of Products using the minimum number of logic gates:

a.  $f_1 = \sum(0, 2, 5, 6, 8, 10, 13, 15)$

b.  $f_2 = \sum(0, 2, 4, 8, 10, 14) + \sum_d(5, 6, 7, 12)$

c.  $f_3 = \sum(0, 1, 2, 3, 4, 9) + \sum_d(10, 11, 12, 13, 14, 15)$

d.  $f_4 = \prod(0, 2, 3, 4, 8, 10, 11)$