UNIVERSITY OF THESSALY

ELECTRICAL AND COMPUTER ENGINEERING DEPARTMENT

DIGITAL DESIGN

5th Homework Set

1. Implement the expressions with:

a) decoders and

b) 4-to-1 multiplexers:

a. F(A, B, C, D, E) = Σ(4, 5, 6, 7, 10, 11, 15, 17, 19, 20, 21, 23, 26, 27, 28, 29, 30, 31) + d(8, 14)
b. F(A, B, C, D, E) = Σ(0, 1, 3, 7, 11, 12, 13, 14, 15, 19, 22, 23, 26, 27, 30) + d(2, 9, 20, 24, 31)
c. F(A, B, C, D, E) = Σ(12, 13, 14, 15, 17, 19, 20, 21, 22, 23, 25, 27, 28, 29, 30, 31)