جامعة بيرزيت
BIRZEIT UNIVERSITY

Faculty of Engineering & Technology – Electrical & Computer Engineering Department
Digital Systems ENCS2340 – Quiz#1

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Question#1: The simplest form for F = Y.(X+Y) + (X+Y).Z` +Y.Z is

$F = yx + y + x z' + y z' + yz$

$y(1+x) + x z' + y(z'+z)$

$y + x z' + y$

$(y+y) + x z'$

$= y + x z'$

3

Question#2: Do the following operation in BCD 999 + 997

1996

1001 1001 1001

1001 1001 0111

1 0001 1001 1000

0110 + 0110 + 0110

1 1001 1000 0110

0001 1001 1001 0110

=1996

3

Question#3: do the following operations $(AFAE)_{16}$ + $(AFAE)_{16}$

A F A E

A F A E

1 7 F 5 C

$= 17F5C_{16}$

1.5

Question#4: Given the function $F(a, b, c) = a(b' + c)$. Express F as a product of Maxterms

$F(a,b,c) = ab' + ac$

$F(a,b,c) = ab'(c+c') + ac\cdot(b+b')$

$= ab'c + ab'c' + abc + ab'c$

101 , 100 , 111 , 101

5 , 4 , 7

$F(a,b,c) = \Sigma m(4,5,7)$

$F(a,b,c) = \Pi M(0,1,2,3,6)$

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