

SIT111 3.2C

a)

$$f(x,y) = -1$$

	x=0001(1)	y=0011(3)
zx-1	0000	-
nx-1	1111	-
zy-1	-	0000
ny-0	-	-
f-1	1111(-1)	-
no-0		
Output:1111(-1)		

b)

$$f(x,y) = !x$$

	x=1010 (10)	y=0011 (3)
zx-0		
nx-0	-	-
zy-1	-	-
ny-1	-	-
f-0	-	-
no-1	-	-
Output:0101(5)	0101(5)	

c)

$f(x,y) = x+1$	$x=1011 (11)$	$y=0001(1)$
$zx-0$	-	-
$nx-1$	0100	-
$zy-1$	-	-
$ny-1$	-	-
$f-1$	0100+1	-
$no-1$	-	-

Output: 0101(5)

d)

$f(x,y) = x+y$	$x=1011 (11)$	$y=0101 (5)$
$zx-0$	-	-
$nx-0$	-	-
$zy-0$	-	-
$ny-0$	-	-
$f-1$	1011+0101	-
$no-0$	-	-

Output: 10000(16)

e)

$f(x,y) = x \& y$	$x=1011(11)$	$y=1001(9)$
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zx-0	-	-
nx-	-	-
0	-	-
zy-0	-	-
ny-	-	-
f-0	-	-
0	-	-
no-0	-	-

Output: 1011 AND 1001

: 1001(9)