

Information Technology University of the Punjab
SE201 Digital Logic Design – Fall 2024
Quiz 6

Name: _____

Roll No.: _____

Time allowed: 10 minutes

Maximum Marks: 10

1. The following is the truth table of a three-input, four-output combinational circuit. Program the PAL device shown in Figure below:

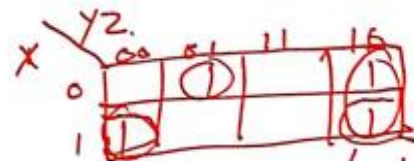
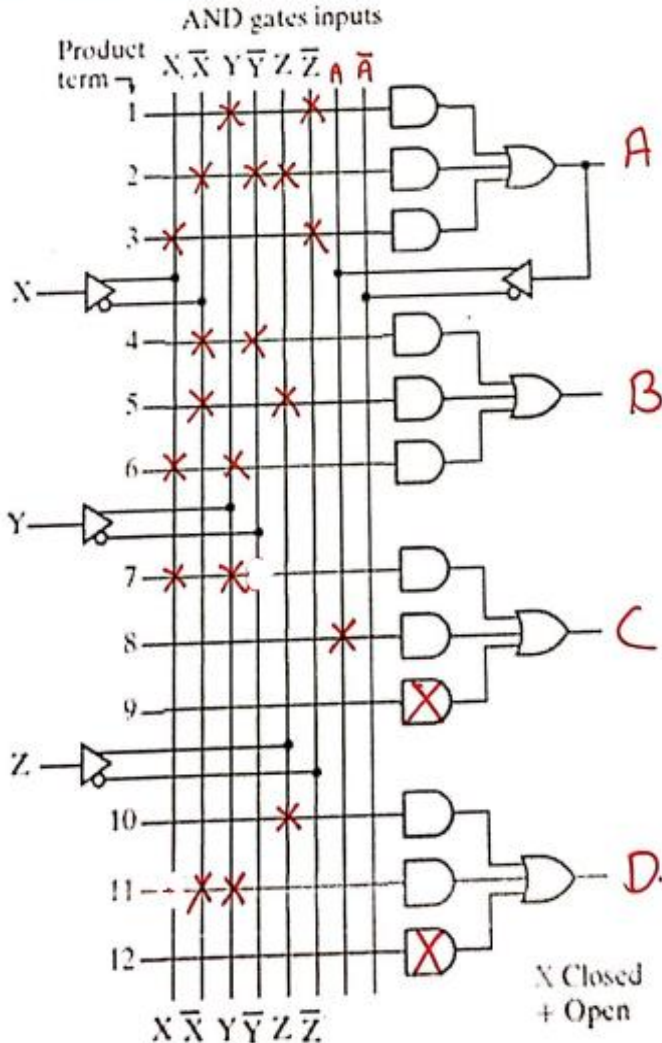
Inputs			Outputs			
X	Y	Z	A	B	C	D
0	0	0	0	1	0	0
0	0	1	1	1	1	1
0	1	0	1	0	1	1
0	1	1	0	1	0	1
1	0	0	1	0	1	0
1	0	1	0	0	0	1
1	1	0	1	1	1	0
1	1	1	0	1	1	1

$$A = \sum m(1, 2, 4, 6)$$

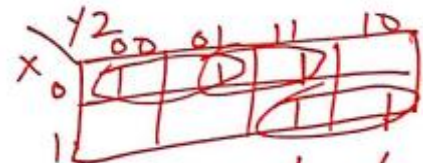
$$B = \sum m(0, 1, 3, 6, 7)$$

$$\textcircled{1} \quad C = \sum m(1, 2, 4, 6, 7)$$

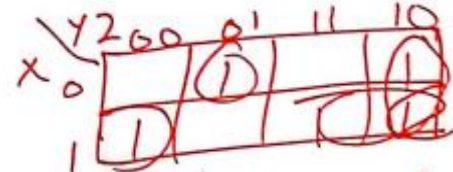
$$D = \sum m(1, 2, 3, 5, 7)$$



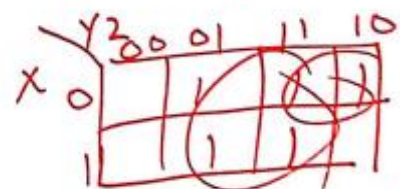
$$A = YZ' + X'Y'Z + XZ' \quad \textcircled{1}$$



$$B = X'Y' + X'Z + X\bar{Y} \quad \textcircled{1}$$



$$C = XY + A \quad \textcircled{1}$$



$$D = Z + X'Y \quad \textcircled{1}$$

$\textcircled{5}$