BRAC UNIVERSITY
Inspiring Excellence

CSE260: Digital Logic Design
Summer 2025
Quiz - 02
Duration: 25 minutes

B

Name: Solution	ID:	Section:

1.CO1	Convert the Boolean function to its Canonical SOP form. F(X,Y,Z) = (Y'+Z)'.(XZ+Y)+X'	5
2.CO1	F(A,B,C,D)=Σ(0,1,3,4,5,8,9,11) c. Use Karnaugh Map to find the simplified expression. d. Implement the simplified expression using only NOR gates	10

$F = y \cdot z'(xz+y) \cdot + x'$

$= (xyz \cdot z') + yz' + x'$

$= yz' + x'$

$= yz'(x+x') + x'(y+y')(z+z')$

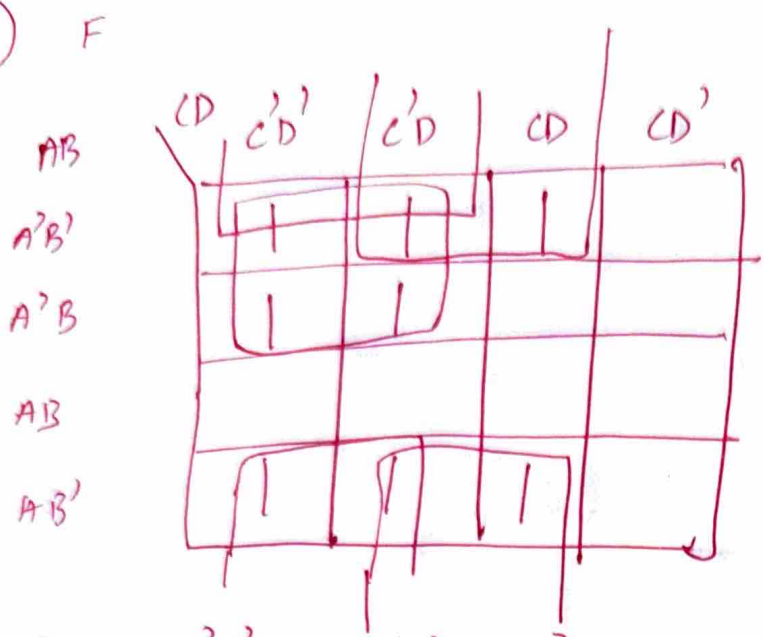
$= xyz' + x'yz' + (x'y + xy')(z+z')$

$= xyz' + x'yz' + x'yz + x'yz' + xy'z + xy'z'$

$= 110, 010, 011, 010, 101, 100$

$= \Sigma(6, 2, 3, 5, 4)$

2) F



$F = A'C' + B'C' + B'D$