

الاجوبة النموذجية للمرحلة الاولى/برمجيات+نظم

الدور الاول 2011/2012

Q1/

For n=1

A1=1, B1=1, Cn-1=1

$\Sigma = 1$, and C1=1

For n=2

A2=0, B2=0, Cn-1=1

$\Sigma = 1$, and C2=0

For n=3

A3=1, B3=0, Cn-1=0

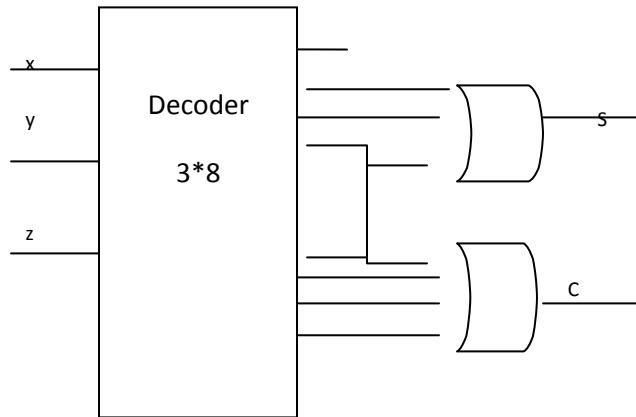
$\Sigma = 1$, and C3=0

For n=4

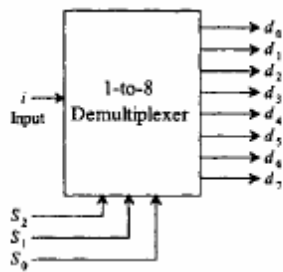
A4=1, B4=1, Cn-1=0

$\Sigma = 0$, and C4=1

Q2/

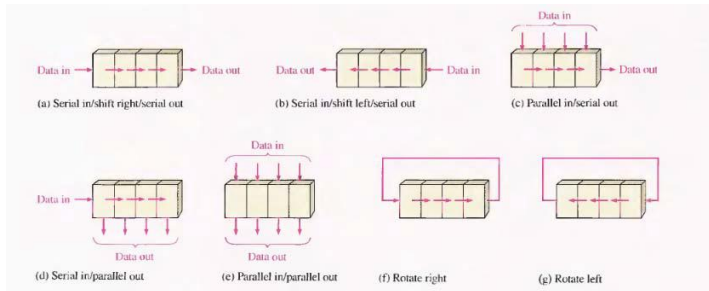


Q3/



Q4/

- 1- Serial in\ Serial out shift right.
- 2- Serial in\ Serial out shift left.
- 3- Parallel in\Serial out.
- 4- Serial in\Parallel out.
- 5-Parallel in\ Parallel out.
- 6 Rotate right.
- 7- Rotate left.



Q5/

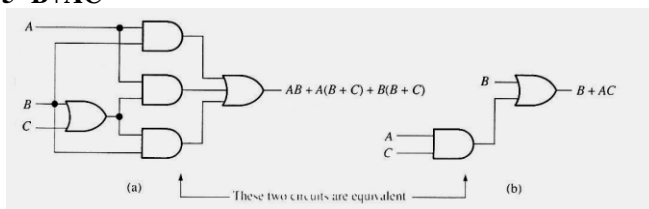
1-

1		1	
1		1	
X	x	X	X
1		x	X

$$Y = CD + \bar{C}\bar{D}$$

2-

- 1- $AB + AB + AC + BB + BC$
- 2- $AB + AB + AC + B + BC$
- 3- $AB + AC + B + BC$
- 4- $AB + AC + B$
- 5- $B + AC$



Q6/

1-

16 650

16 40 =====6

16 2 =====8

0 2

LSD = (286)₁₆

2-

Binary ===== 0 + 1 + 0 + 0

Gray ===== 0 1 1 0

3-

3BC

+428

7E4

4-

Binary Number 1 0 1 1 0 0 1 0 0 1

1's Complement 0 1 0 0 1 1 0 1 0

1 0

2's Complement of a binary number is found by adding 1 to the LSB of the 1's Complement.

2's Complement = (1's Complement) + 1

Binary number 10110010

1's complement 01001101

Add 1 + 1

2's complement 01001110

5-

45

-14

31