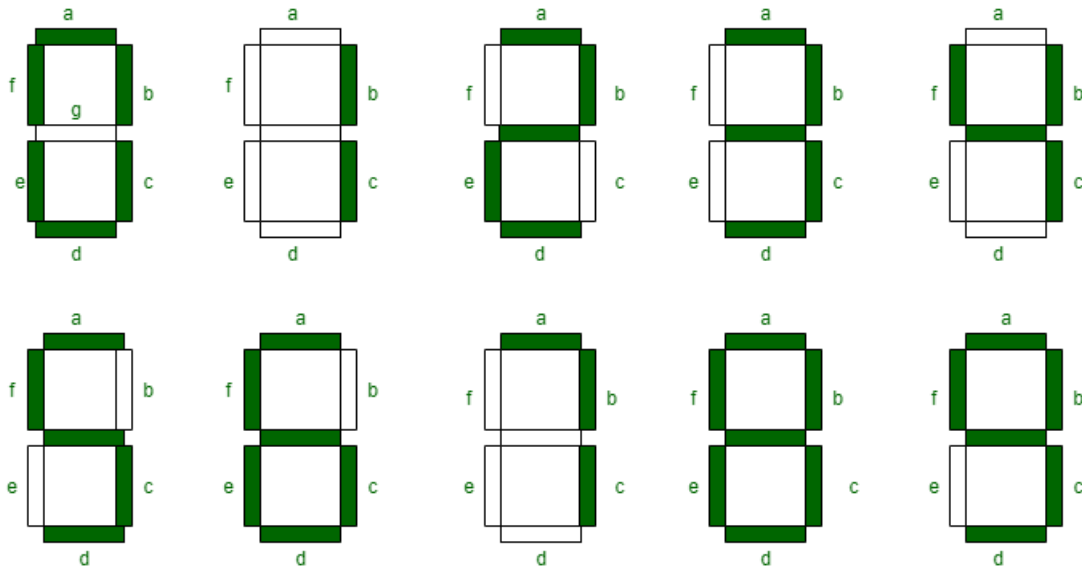


All Formats Of 7-Segment Question



➤ Truth Table

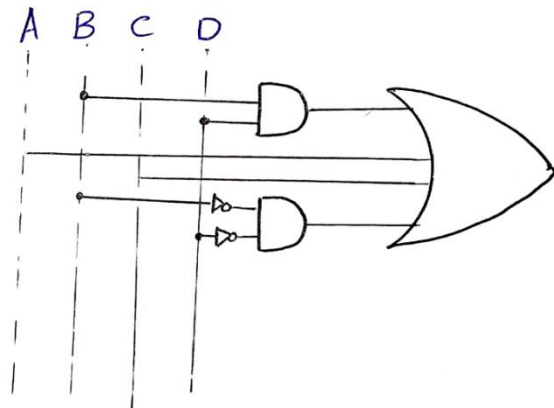
Digit	A	B	C	D	a	b	c	d	e	f	g
0	0	0	0	0	1	1	1	1	1	1	0
1	0	0	0	1	0	1	1	0	0	0	0
2	0	0	1	0	1	1	0	1	1	0	1
3	0	0	1	1	1	1	1	1	0	0	1
4	0	1	0	0	0	1	1	0	0	1	1
5	0	1	0	1	1	0	1	1	0	1	1
6	0	1	1	0	1	0	1	1	1	1	1
7	0	1	1	1	1	1	1	0	0	0	0
8	1	0	0	0	1	1	1	1	1	1	1
9	1	0	0	1	1	1	1	1	0	1	1
10	1	0	1	0	x	x	x	x	x	x	x
11	1	0	1	1	x	x	x	x	x	x	x
12	1	1	0	0	x	x	x	x	x	x	x
13	1	1	0	1	x	x	x	x	x	x	x
14	1	1	1	0	x	x	x	x	x	x	x
15	1	1	1	1	x	x	x	x	x	x	x

A, B, C and D → Inputs (a, b, c, d, e, f and g) → The output of segments

➤ K-maps & Implementation

Segment a:

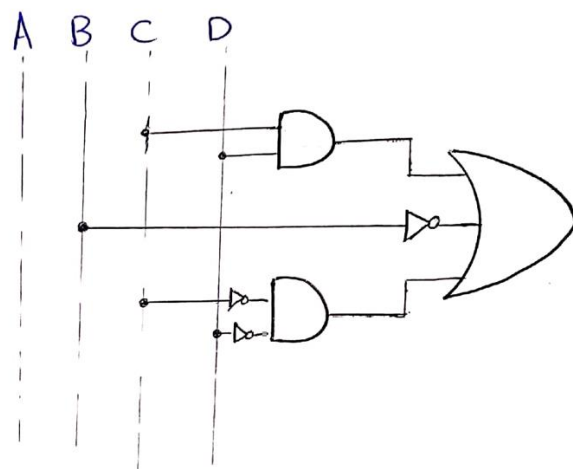
AB \ CD	00	01	11	10
00	1		X	1
01		1	X	1
11	1	1	X	X
10	1	1	X	X



$$a = A + c + BD + \bar{B}\bar{D}$$

Segment b:

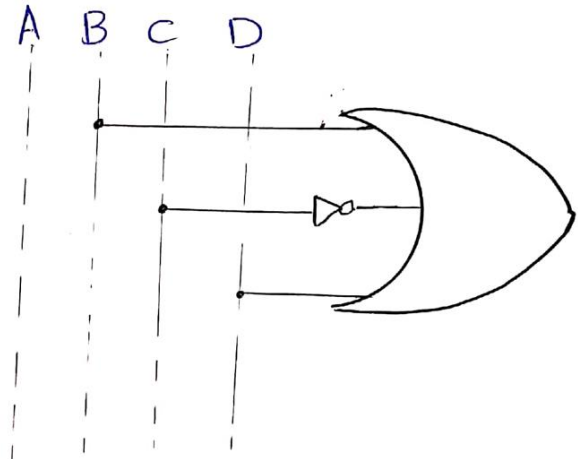
AB \ CD	00	01	11	10
00	1	1	X	1
01	1		X	1
11	1	1	X	X
10	1		X	X



$$b = \bar{B} + \bar{C}\bar{D} + CD$$

Segment c :

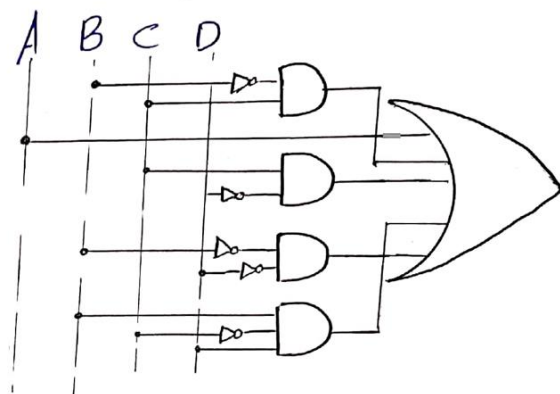
AB \ CD	00	01	11	10
00	1	1	X	1
01	1	1	X	1
11	1	1	X	X
10		1	X	X



$$C = B + \bar{C} + D$$

Segment d :

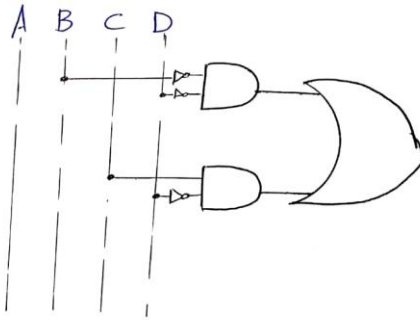
AB \ CD	00	01	11	10
00	1		X	1
01		1	X	1
11	1		X	X
10	1	1	X	X



$$d = A + \bar{B}\bar{C} + C\bar{D} + \bar{B}\bar{D} + B\bar{C}D$$

Segment e:

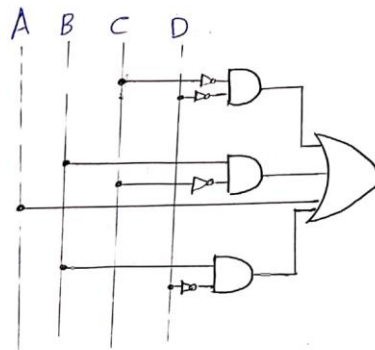
AB \ CD	00	01	11	10
00	1		X	1
01			X	
11			X	X
10	1	1	X	X



$$e = \bar{B}\bar{D} + c\bar{D}$$

Segment f:

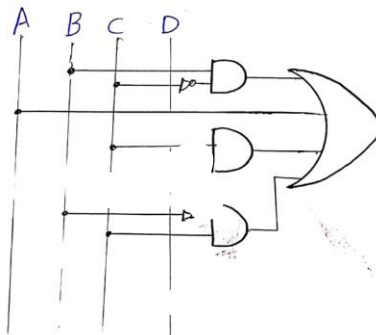
AB \ CD	00	01	11	10
00	1	1	X	1
01		1	X	1
11			X	X
10		1	X	X



$$f = A + \bar{C}\bar{D} + B\bar{C} + B\bar{D}$$

Segment g:

AB \ CD	00	01	11	10
00		1	X	1
01		1	X	1
11	1		X	X
10	1	1	X	X



$$g = A + B\bar{C} + c\bar{D} + \bar{B}c$$

لا تنسونا فضلاً من صالح
دعائكم.

وفقكم الله وسددكم.