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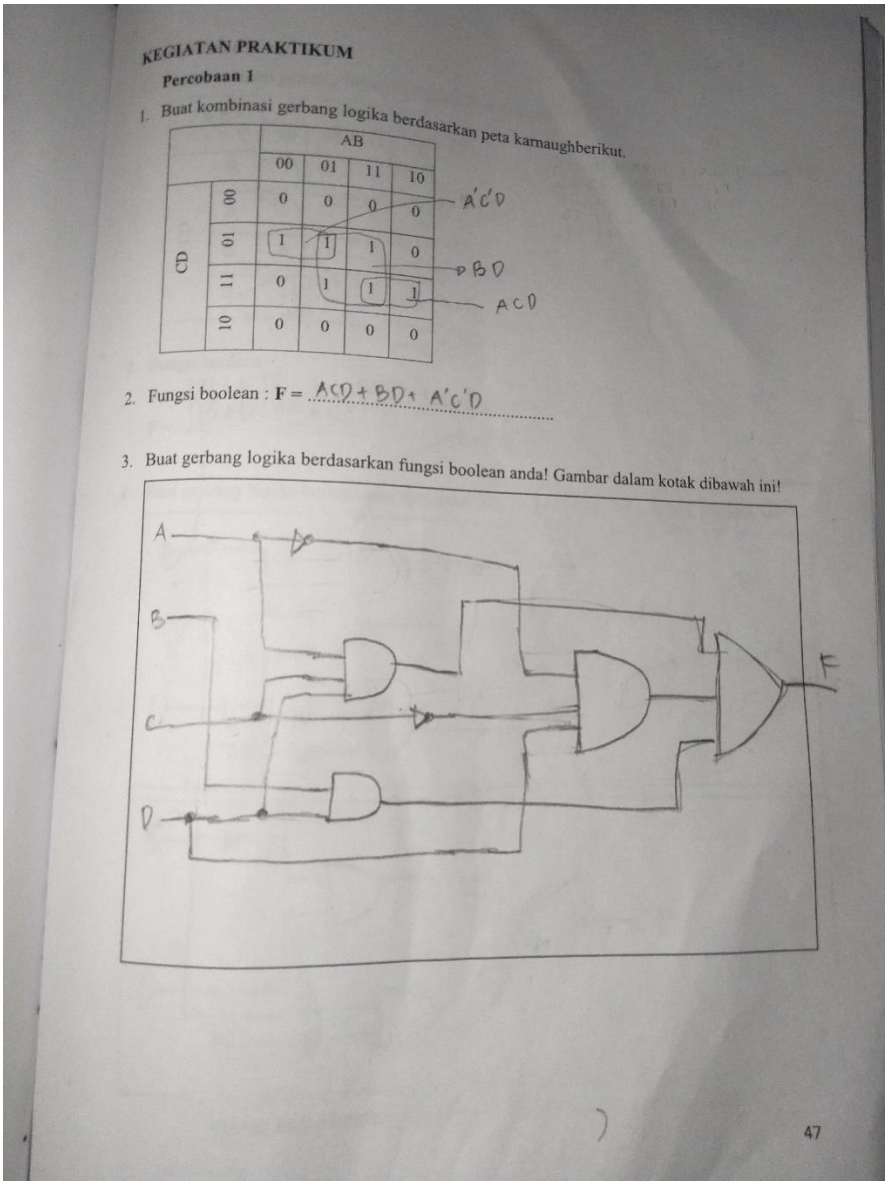
Kelas : D

MODUL KE 6

<u>Kegiatan Praktikum</u>

PERCOBAAN 1



KEGIATAN PRAKTIKUM

Percobaan 1

1. Buat kombinasi gerbang logika berdasarkan peta karnaughberikut.

CD \ AB	00	01	11	10
00	0	0	0	0
01	1	1	1	0
11	0	1	1	1
10	0	0	0	0

A'C'D
BD
ACD

2. Fungsi boolean : **F** = ACD + BD + A'C'D

3. Buat gerbang logika berdasarkan fungsi boolean anda! Gambar dalam kotak dibawah ini!

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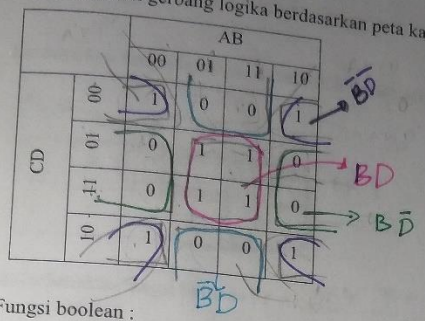
PERCOBAAN 2

Percobaan 2

1. Buat kombinasi gerbang logika berdasarkan peta karnaugh berikut!

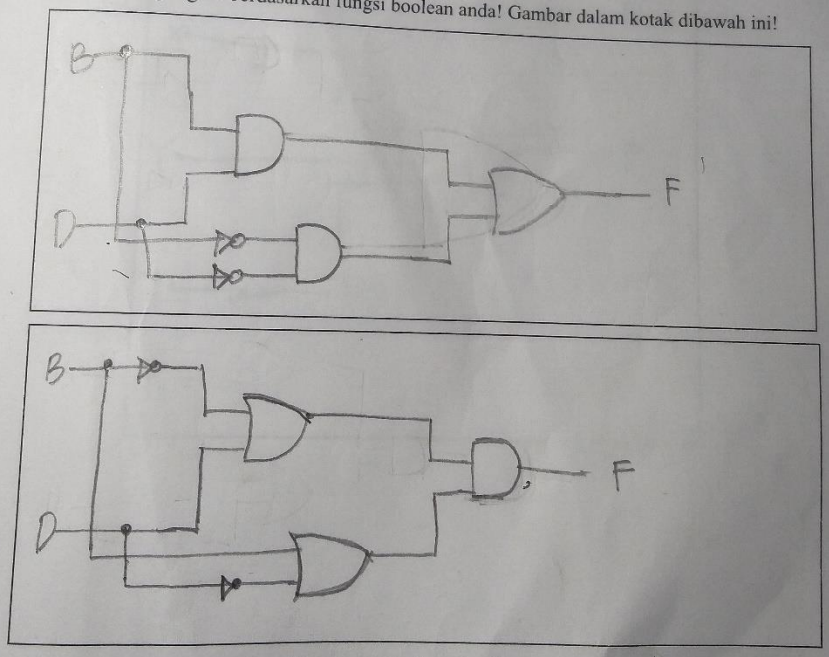


2. Fungsi boolean :

F = $B\bar{D} + \bar{B}\bar{D}$ ..... (AND-OR) SOP

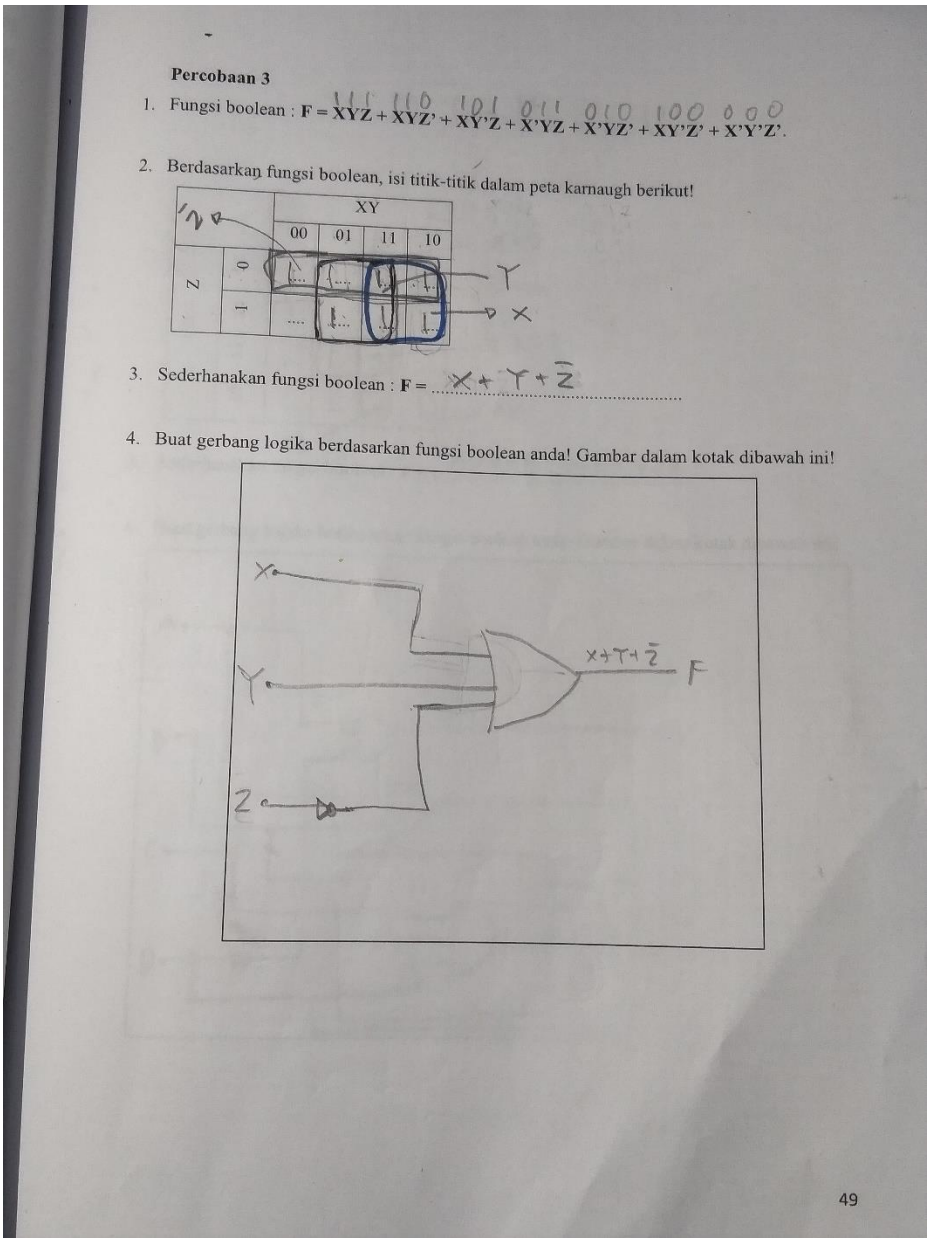
F = $(B+\bar{D})(\bar{B}+\bar{D})$ ..... (OR-AND) POS

3. Buat gerbang logika berdasarkan fungsi boolean anda! Gambar dalam kotak dibawah ini!



Apakah kedua kombinasi memberikan hasil yang sama? Ya / tidak

PERCOBAAN 3



Percobaan 3

1. Fungsi boolean : **F = XYZ + XYZ' + XY'Z + X'YZ + X'YZ' + XY'Z' + X'Y'Z'.** 111 110 101 011 010 100 000

2. Berdasarkan fungsi boolean, isi titik-titik dalam peta karnaugh berikut!

		XY			
		00	01	11	10
Z	0	1	1	1	1
	1	1	1	1	1

Y
X

3. Sederhanakan fungsi boolean : **F =** $X + Y + \bar{Z}$

4. Buat gerbang logika berdasarkan fungsi boolean anda! Gambar dalam kotak dibawah ini!

PERCOBAAN 4

Percobaan 4

1. Fungsi boolean : **F = AD' + ABC + ABC' + BCD + BC'D' + AB'CD'.**

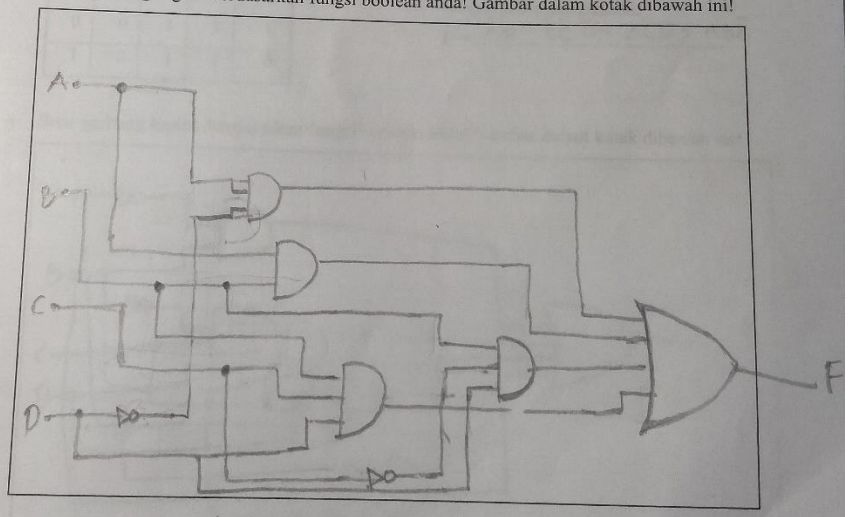
2. Berdasarkan fungsi boolean, isi titik-titik dalam peta karnaugh berikut!

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

$B\bar{C}\bar{D}$ → BCD → $A\bar{D}$

3. Sederhanakan fungsi boolean : **F =** $A\bar{D} + AB + BCD + B\bar{C}\bar{D}$

4. Buat gerbang logika berdasarkan fungsi boolean anda! Gambar dalam kotak dibawah ini!



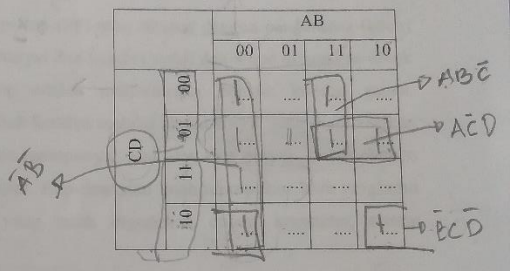
PERCOBAAN 5

Percobaan 5

1. Tabel Fungsi boolean :

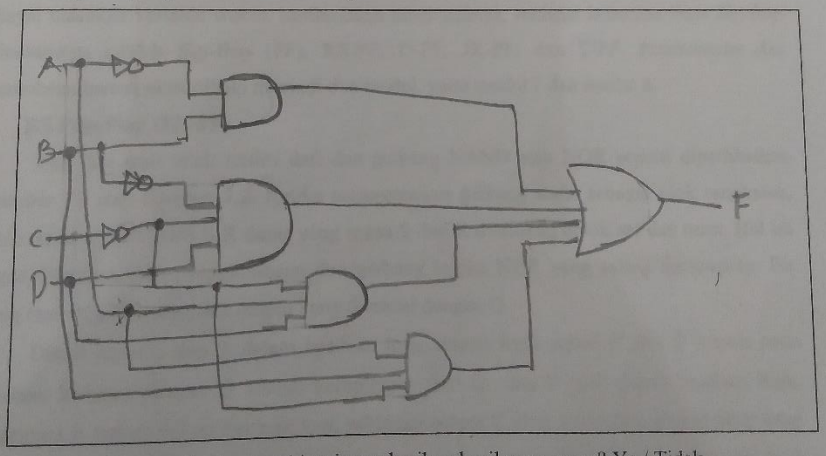
A	B	C	D	F
0	0	0	0	**1**
1	0	0	0	0
0	1	0	0	0
1	1	0	0	**1**
0	0	1	0	**1**
1	0	1	0	**1**
0	1	1	0	0
1	1	1	0	0
0	0	0	1	**1**
1	0	0	1	**1**
0	1	0	1	0
1	1	0	1	**1**
0	0	1	1	**1**
1	0	1	1	0
0	1	1	1	**1**
1	1	1	1	0

2. Berdasarkantabel. Isi titik-titik dalam karnaugh map berikut!



3. Fungsi booleansederhana:
F = $\bar{A}B + B\bar{C}D + A\bar{C}D + AB\bar{C}$

4. Buat gerbang logika berdasarkan fungsi boolean anda! Gambar dalam kotak dibawah ini!



Apakah kedua kombinasi memberikan hasil yang sama? Ya / Tidak