

* TEKNIK ELEKTRO di INDONESIA

1995 Konsorsium Ilmu Teknik menetapkan

TEKNIK ELEKTRO

- Teknik Energi (TTL) — TTL — TE
- Teknik Telekomunikasi — TT
- Teknik Elektronika — TN
- Teknik Kendali
- Teknik Komputer

IEEE 1960

IEE — American
IRE — American

The Institute of Electrical
and Electronic Engineering

4 Matakuliah Dasar

- * Rangkaian Listrik
- * Medan Elektromagnetik
- * Elektronika
- * Rangkaian Logika

* Rangkaian Listrik

- Sumber Tegangan
- Sumber Arus
- Saklar
- Resistor
- Induktor
- Kapasitor

* Medan Elektromagnetik

Fenomena alam

Merupakan Listrik
Gelombang Radio

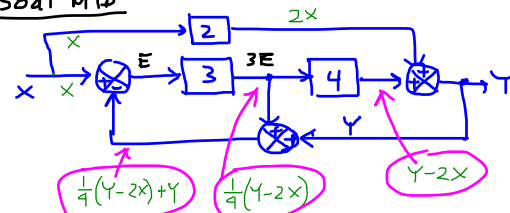
* Elektronika —> KOMPONEN

* Rangkaian Logika, Logika Boolean, "1" "0"

- NOT
- OR
- AND

10+10=100

Soal MID



$$E = X - \left[\frac{1}{4}(Y-2X) + Y \right] \rightarrow 3E = 3 \left[X - \left[\frac{1}{4}(Y-2X) + Y \right] \right]$$

$$3E = \frac{1}{4}(Y-2X) \quad \text{sama}$$

$$\begin{aligned} \frac{1}{4}(Y-2X) &= 3 \left[X - \left[\frac{1}{4}(Y-2X) + Y \right] \right] \\ \frac{1}{4}Y - \frac{1}{2}X &= 3 \left[X - \left[\frac{1}{4}Y - \frac{1}{2}X + Y \right] \right] \\ &= 3 \left[X - \left[\frac{5}{4}Y - \frac{1}{2}X \right] \right] \\ &= 3 \left[X - \frac{5}{4}Y + \frac{1}{2}X \right] \\ &= 3 \left[\frac{3}{2}X - \frac{5}{4}Y \right] \\ &= \frac{9}{2}X - \frac{15}{4}Y \\ \frac{1}{4}Y + \frac{15}{4}Y &= \frac{9}{2}X + \frac{1}{2}X \\ \frac{16}{4}Y &= \frac{10}{2}X \rightarrow 4Y = 5X \\ Y &= \frac{5}{4}X = 1,25X \end{aligned}$$

$$Y = KX$$

$$K = 1,25 = \frac{5}{4}$$



0	0
1	1
10	2
11	3
100	4
101	5
110	6
111	7
1000	8