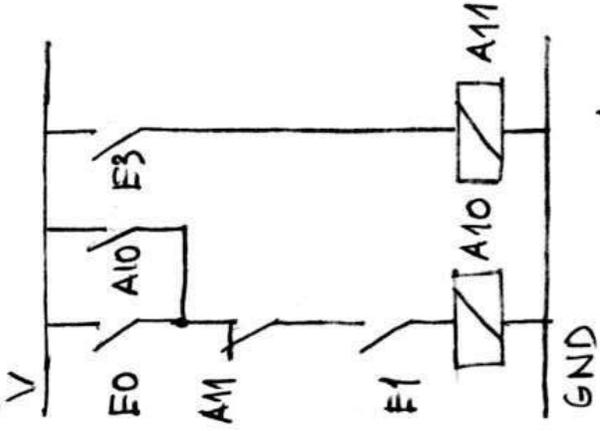
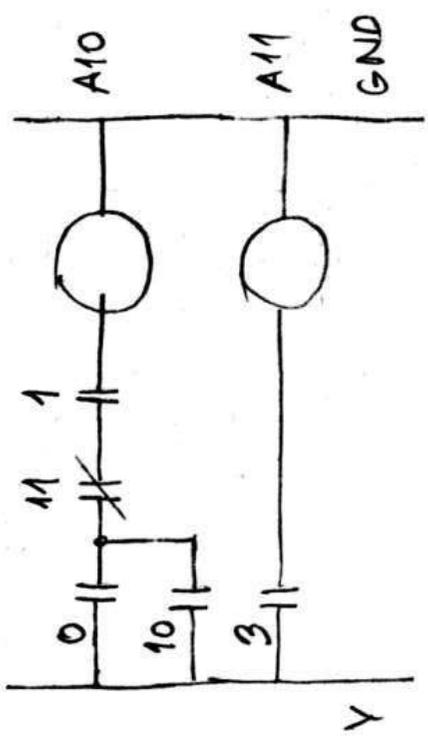


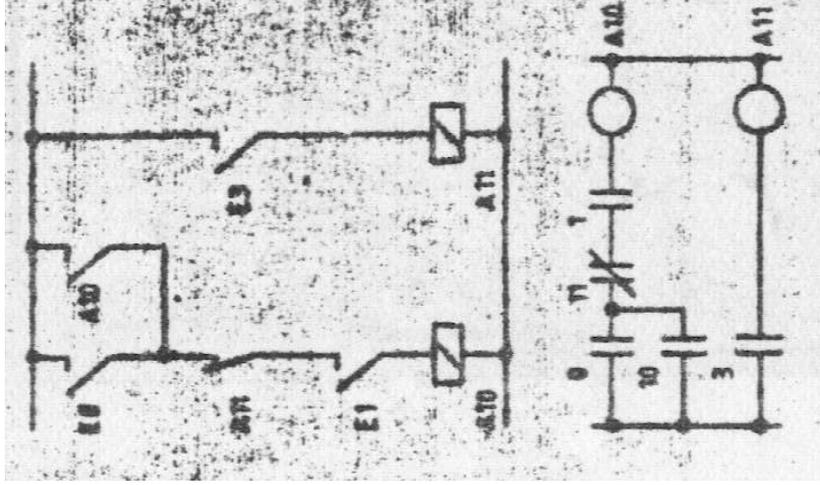
2.2. Röle Mantıklı Devreler, Merdiven (Ladder) Diyagramları



1 (a)



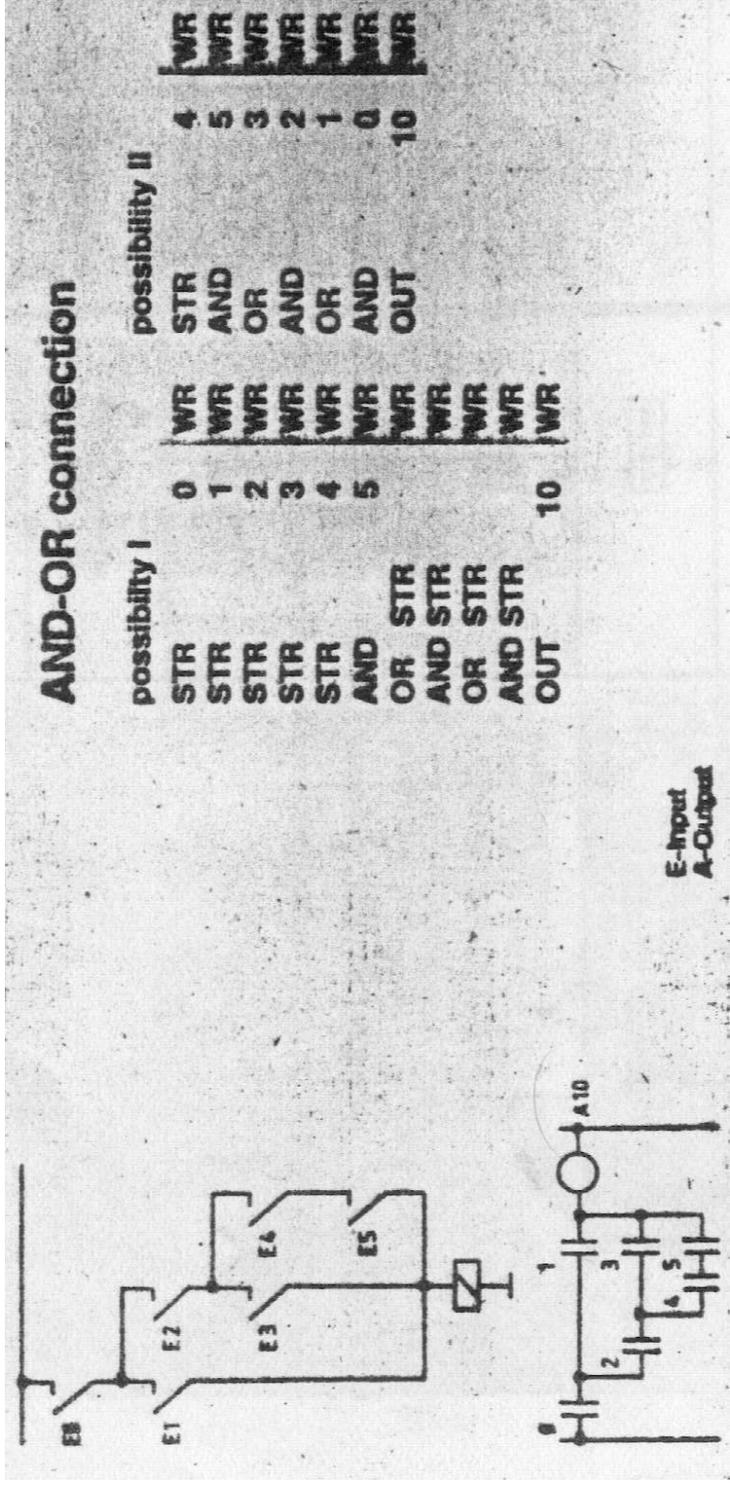
1 (b)



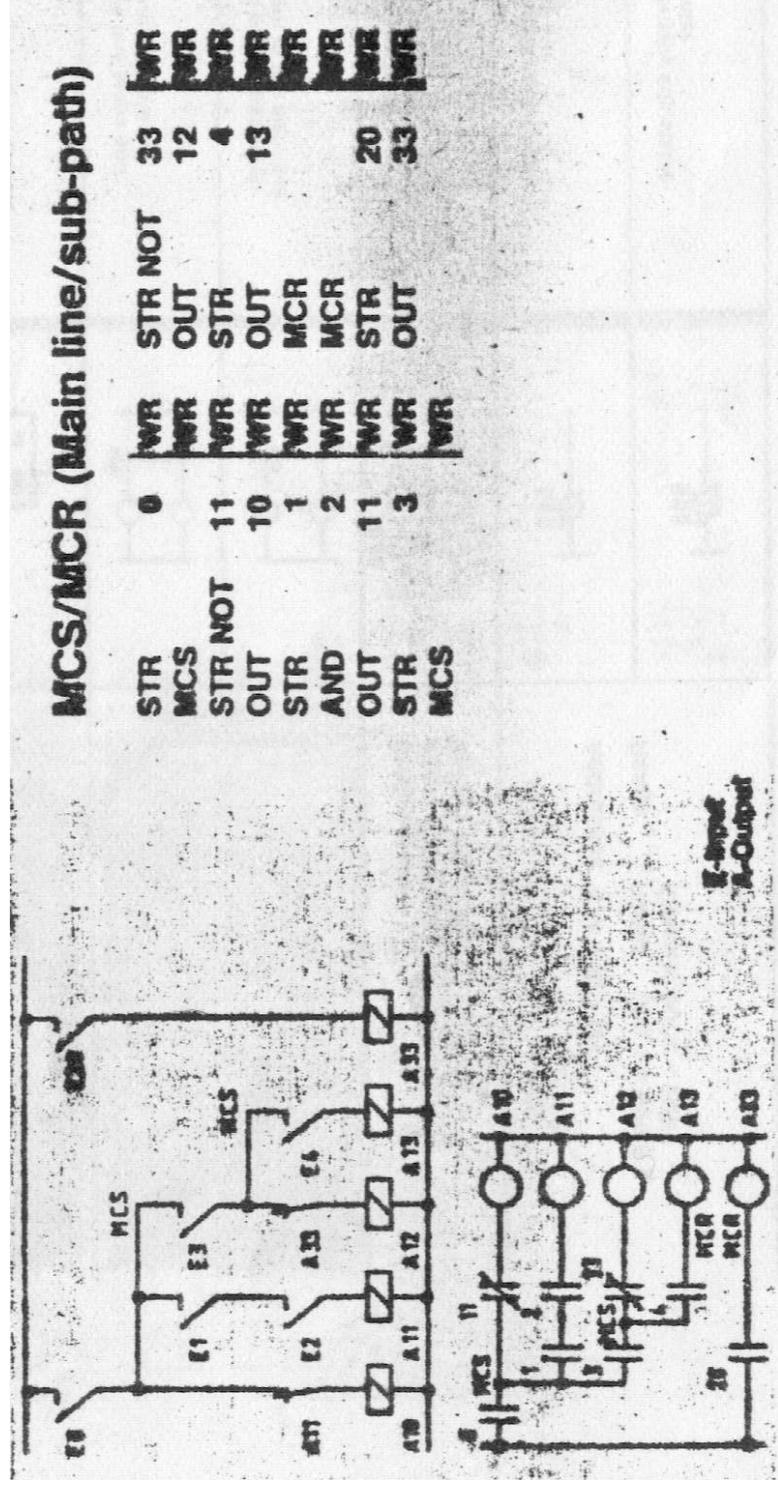
E-Input
A-Output

AND-OR connection

STR	0	WR
OR	10	WR
AND NOT	11	WR
AND	1	WR
OUT	10	WR
STR	3	WR
OUT	11	WR



2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-3



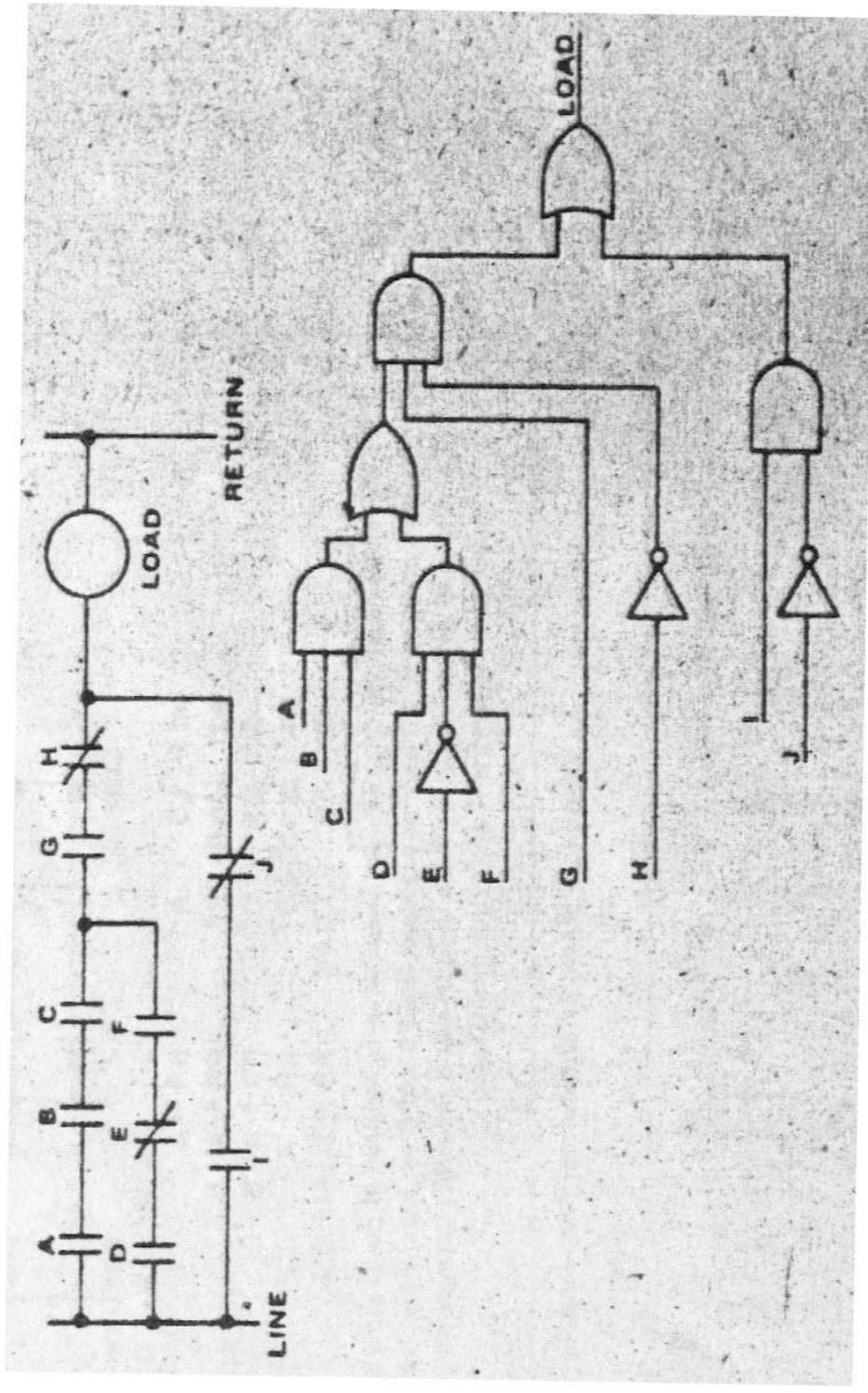
2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-4

#1	LD
#2	AND
#3	AND
#4	STO
#5	LD
#6	ANDC
#7	AND
#8	OR
#9	AND
#10	ANDC
#11	STO
#12	LD
#13	ANDC
#14	OR
#15	STO

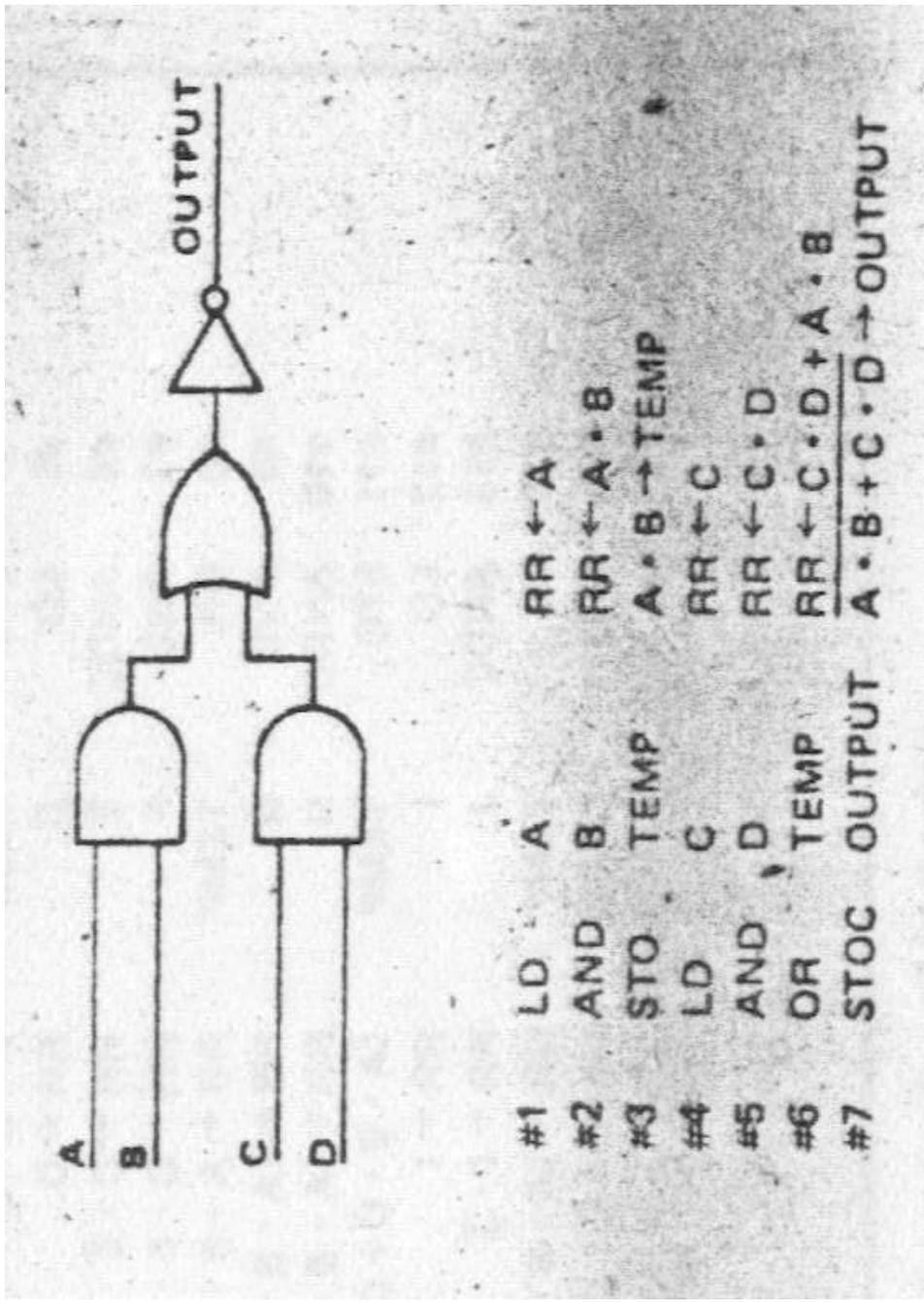
A
B
C
TEMP
D
E
F
TEMP
G
H
TEMP
I
J
TEMP
LOAD

RR ← A
RR ← A · B
RR ← A · B · C
A · B · C → TEMP
RR ← D
RR ← D · \bar{E}
RR ← D · \bar{E} · F
RR ← A · B · C + D · \bar{E} · F
RR ← (A · B · C + D · \bar{E} · F) · G
RR ← (A · B · C + D · \bar{E} · F) · G · \bar{H}
(A · B · C + D · \bar{E} · F) · G · \bar{H} → TEMP
RR ← I
RR ← I · \bar{J}
RR ← (A · B · C + D · \bar{E} · F) · G · \bar{H} + I · \bar{J}
(A · B · C + D · \bar{E} · F) · G · \bar{H} + I · \bar{J} → LOAD

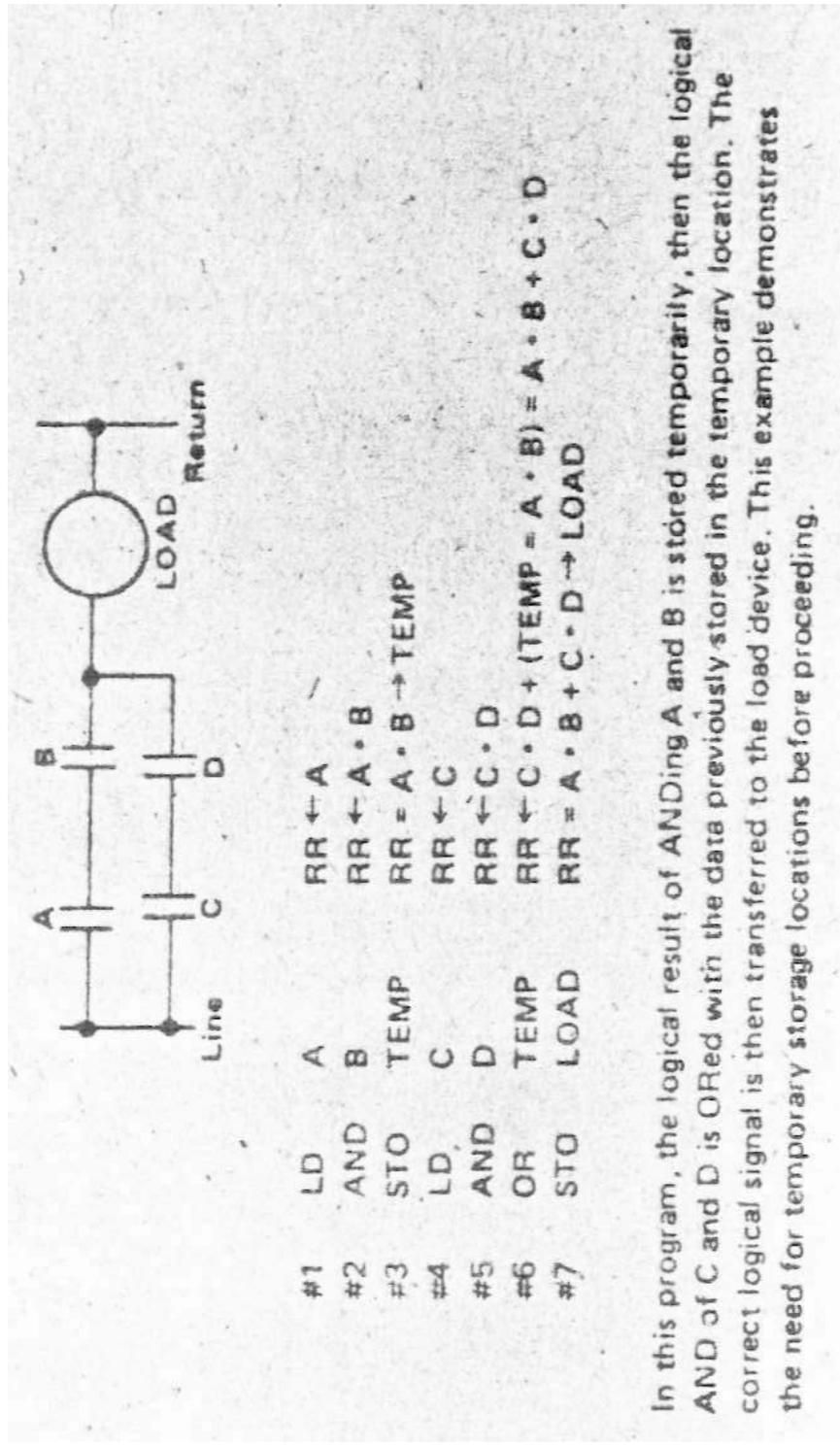
2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-7



2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-8

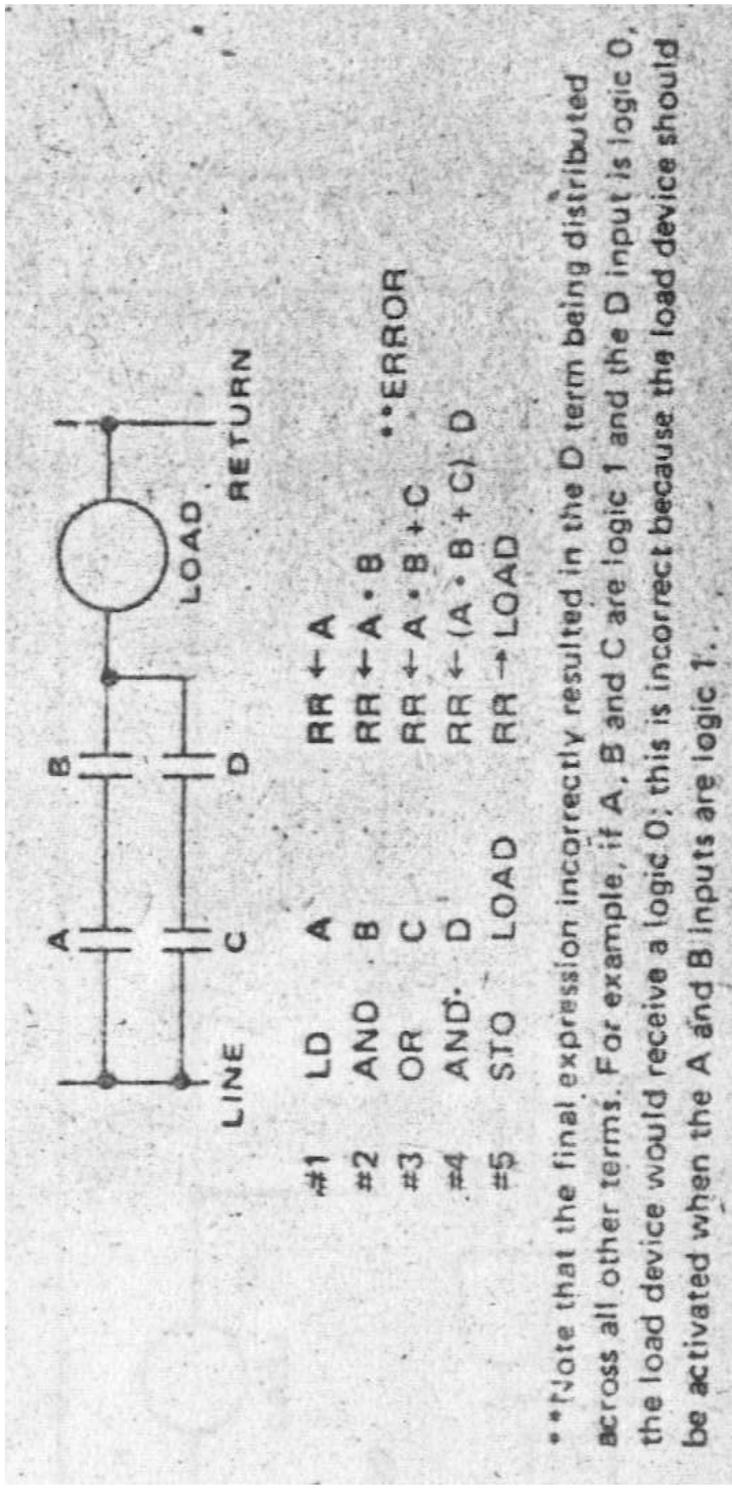


2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-9

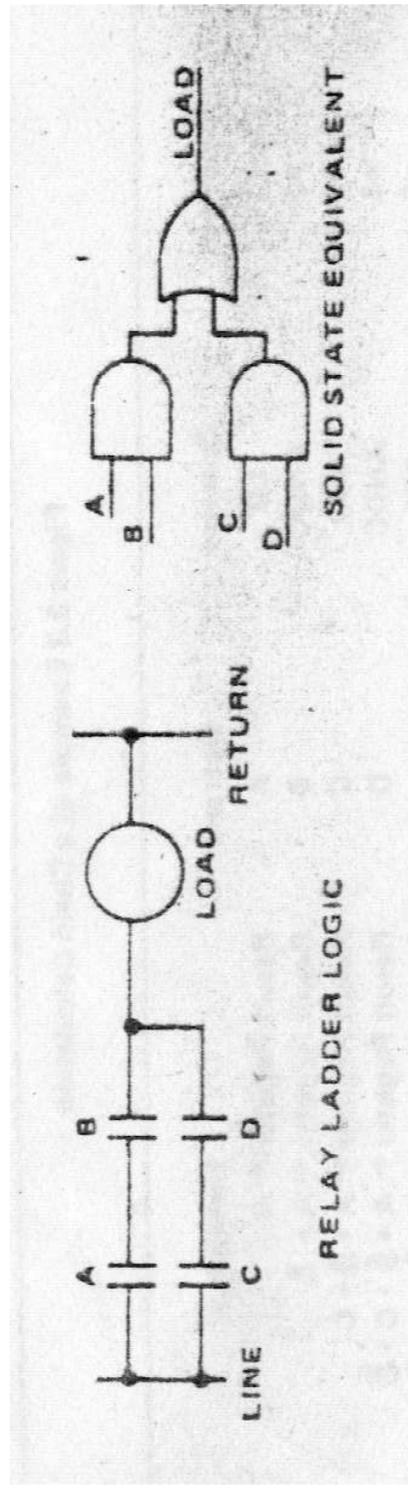


In this program, the logical result of ANDing A and B is stored temporarily, then the logical AND of C and D is ORed with the data previously stored in the temporary location. The correct logical signal is then transferred to the load device. This example demonstrates the need for temporary storage locations before proceeding.

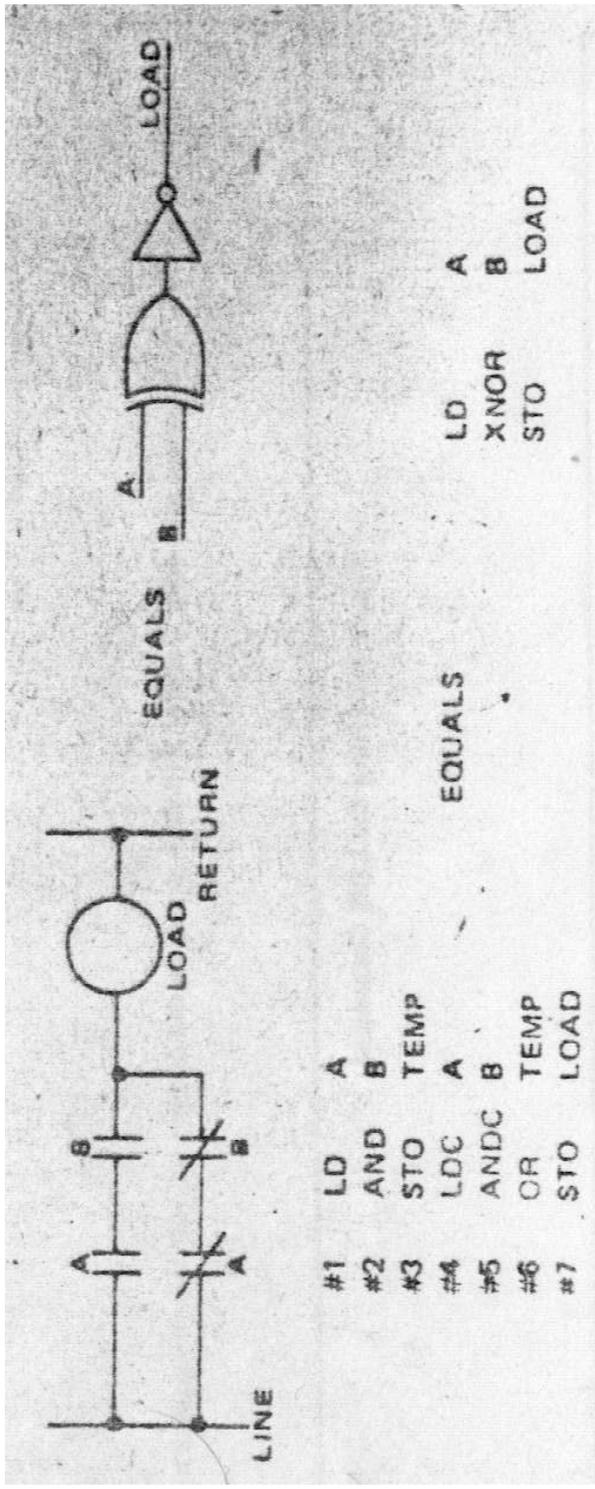
2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-10



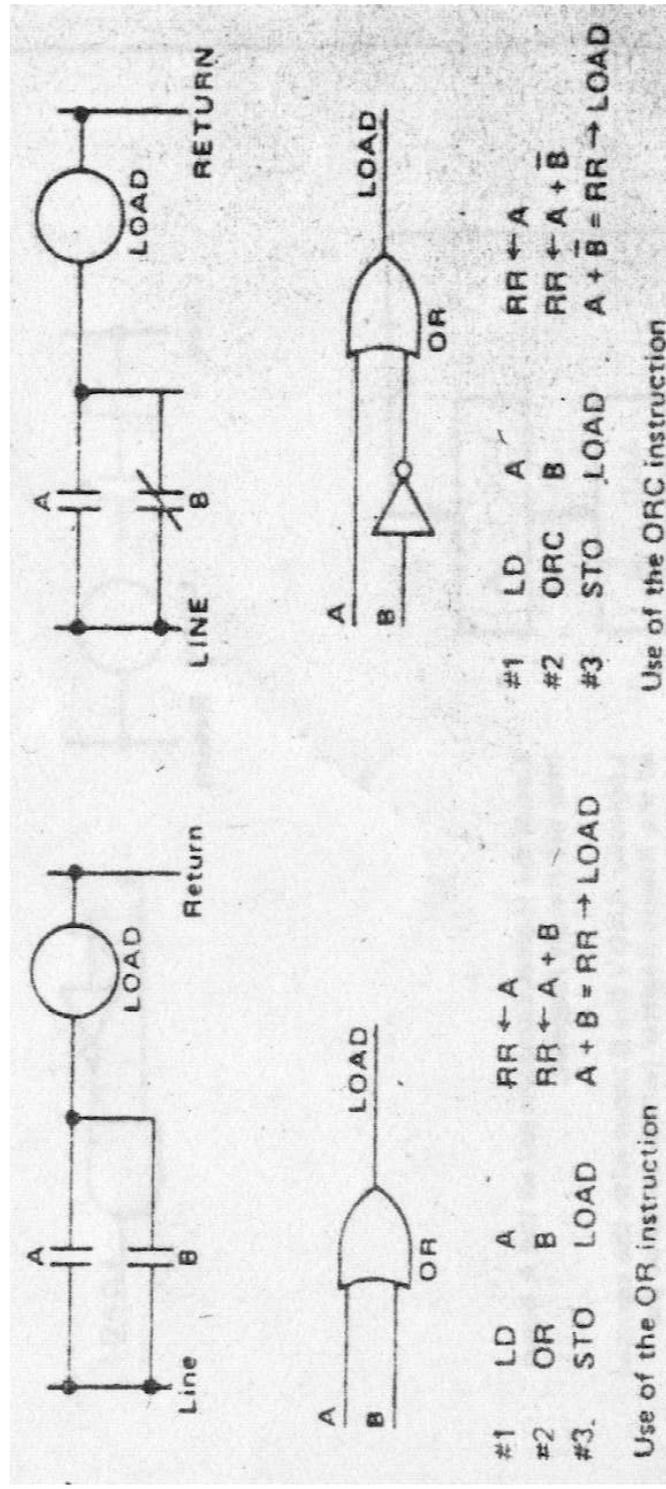
2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-11



2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-12



2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-13



2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-14

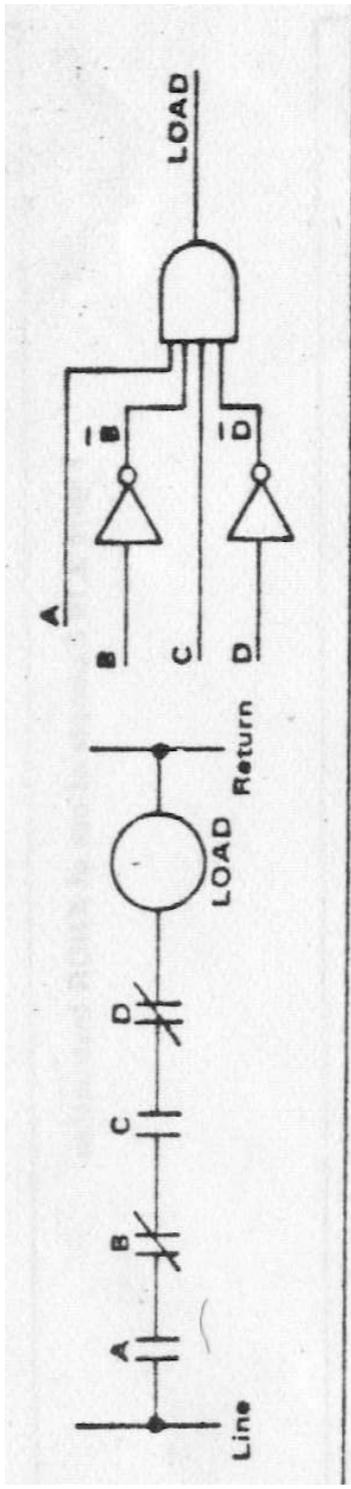
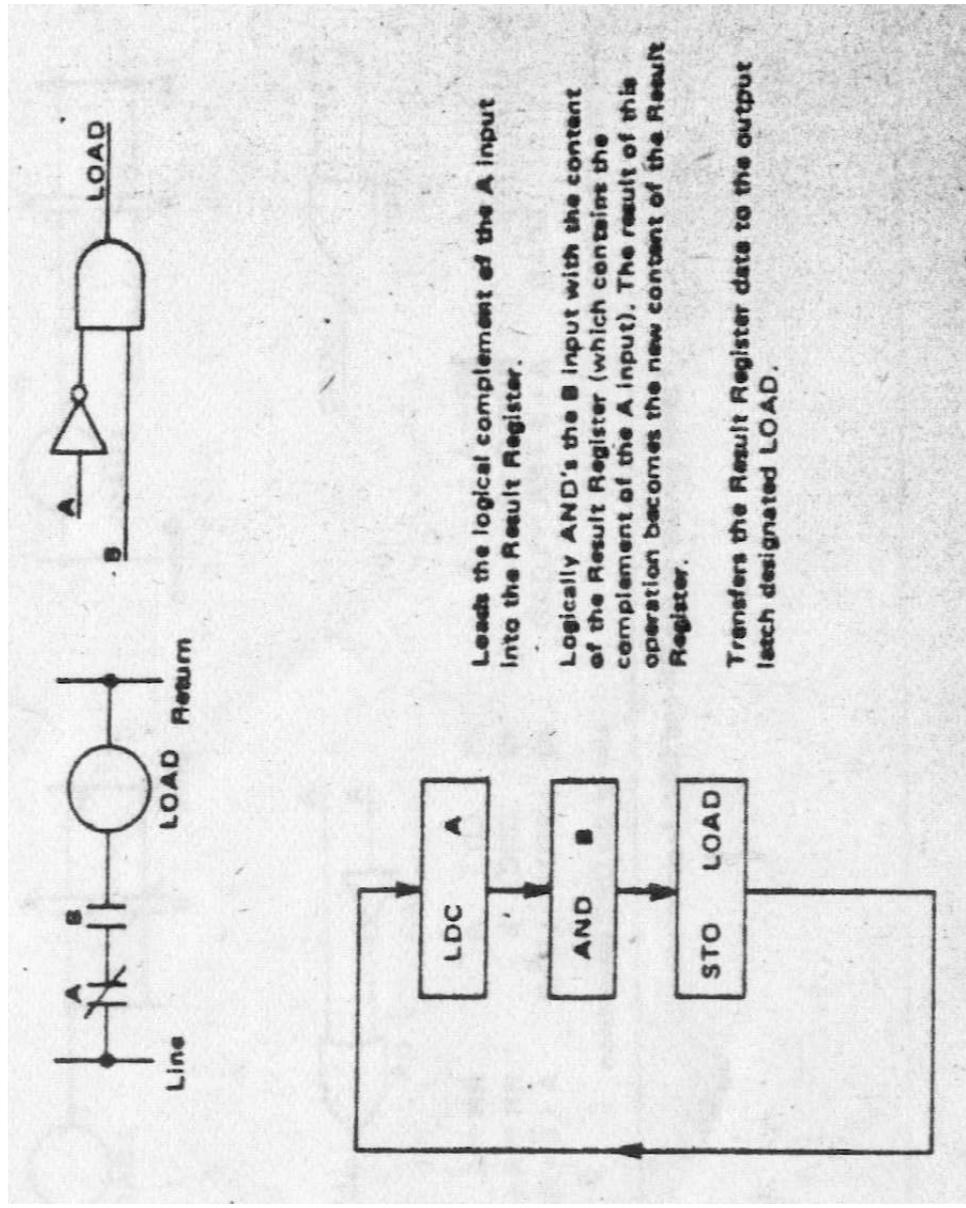


Figure 3.3 Example of a Chain Calculation

Statement	Operator	Operand	Comments
#1	LD	A	Result Register $\leftarrow A$
#2	ANDC	B	Result Register $\leftarrow A \cdot \bar{B}$
#3	AND	C	Result Register $\leftarrow A \cdot \bar{B} \cdot C$
#4	ANDC	D	Result Register $\leftarrow A \cdot \bar{B} \cdot C \cdot \bar{D}$
#5	STO	LOAD	Result Register = $A \cdot \bar{B} \cdot C \cdot \bar{D} \rightarrow \text{LOAD}$

2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-15



2. Programlanabilir Denetleyicilerin Donanımı, Programlanabilir Denetleyiciler , Y.Doç.Dr.Tuncay UZUN 2-16