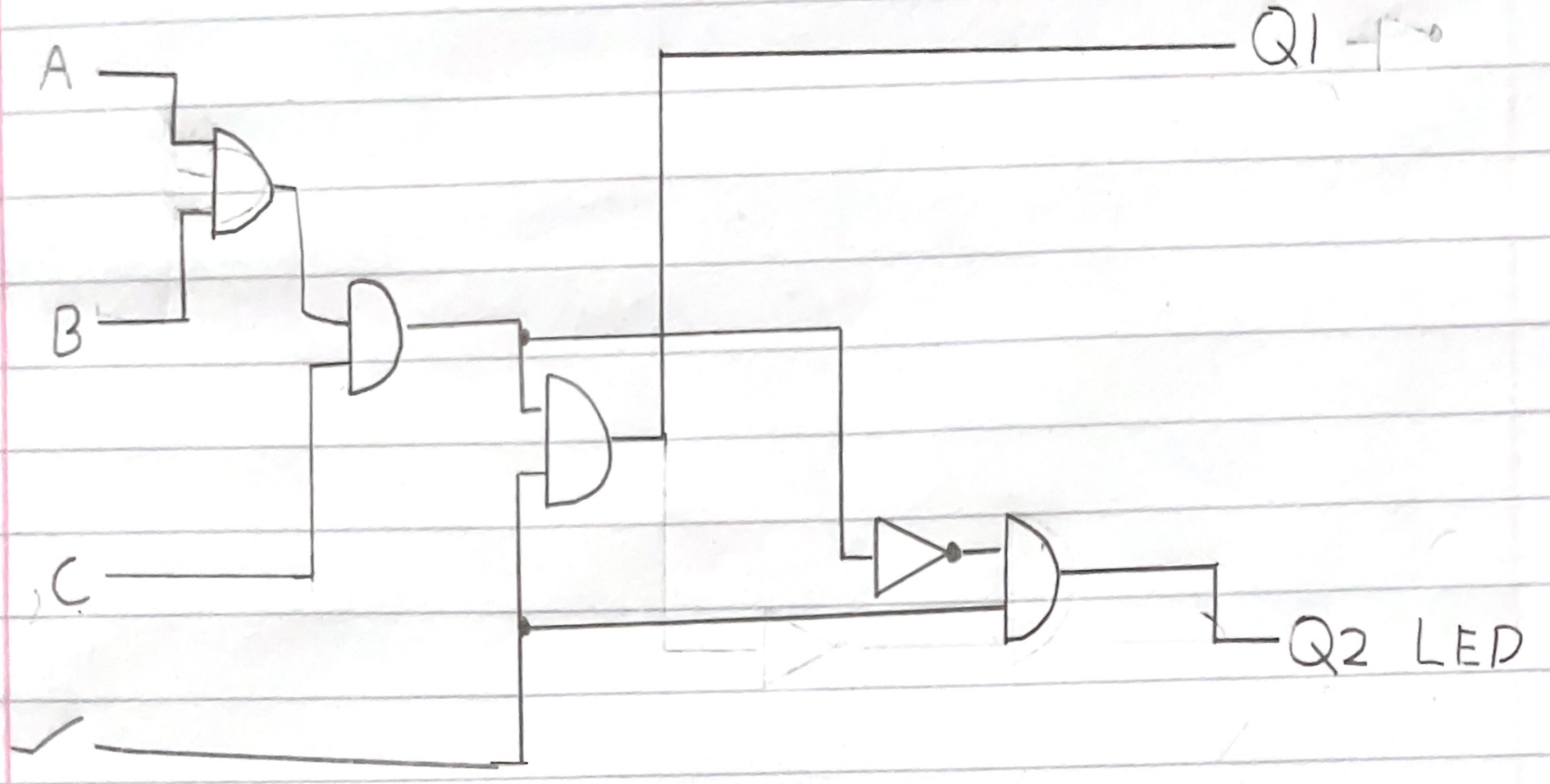
Subsystem №2
Comparison Logic



When A.B.C, Q1 = 1 Q2 = 0 Q1 drives Solenoid
Else Q1 = 0, Q2 = 1 Q2 drives Alarm

555 Monostable

Need to remain high for 5 seconds after input

$T = 1.1RC$

$T = 5$

$\frac{5}{1.1} = RC$

$R = 10 \times 10^3$

$C = \frac{15}{1.1 \times R}$ =

$1.1 \times 47 \times 10^3 \times 100 \times 10^{-6} = 5.45 \simeq 5.5$

$C = 4.7\mu F$

$R = \frac{15}{1.1 \times C}$ =

5.5 Seconds is close enough to Spec.