Momentary LOW

Outputs make transitions when $\bar{S}$ goes LOW and remain in same state after $\bar{S}$ goes back HIGH.
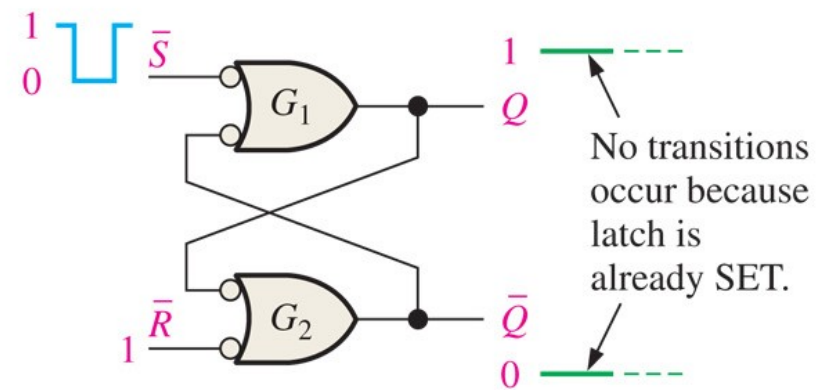
Latch starts out RESET ($Q = 0$).

No transitions occur because latch is already SET.

Latch starts out SET ($Q = 1$).

(a) Two possibilities for the SET operation

Outputs make transitions when $\bar{R}$ goes LOW and remain in same state after $\bar{R}$ goes back HIGH.

Latch starts out SET ($Q = 1$).
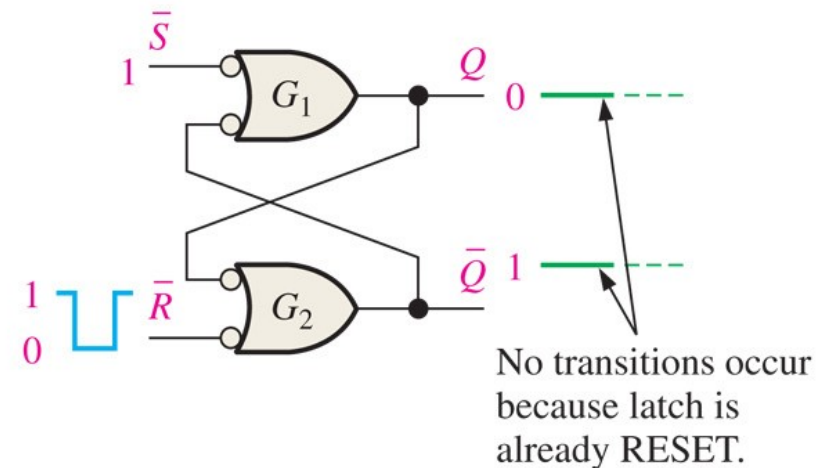
No transitions occur because latch is already RESET.
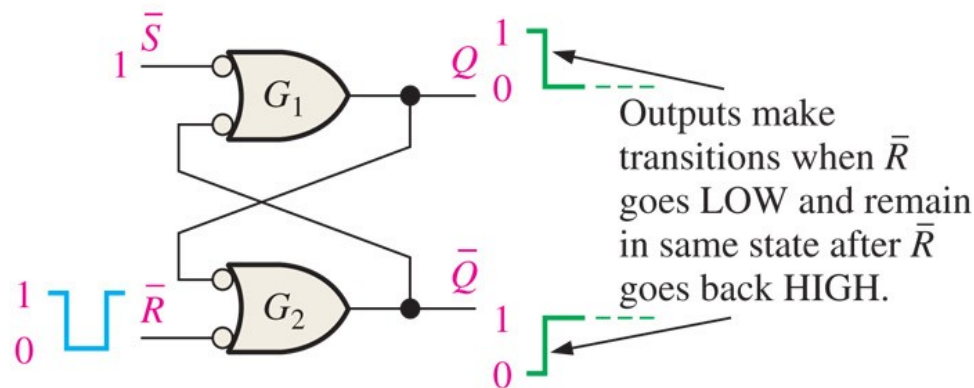
Latch starts out RESET ($Q = 0$).

(b) Two possibilities for the RESET operation

Outputs do not change state. Latch remains SET if previously SET and remains RESET if previously RESET.
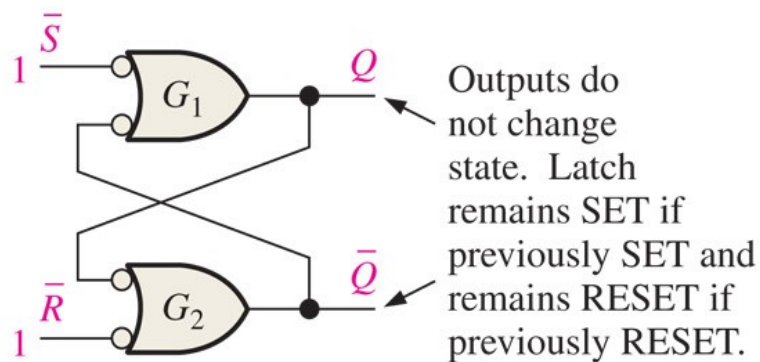
HIGHS on both inputs

(c) No-change condition

Output states are uncertain when input LOWs go back HIGH at approximately the same time.
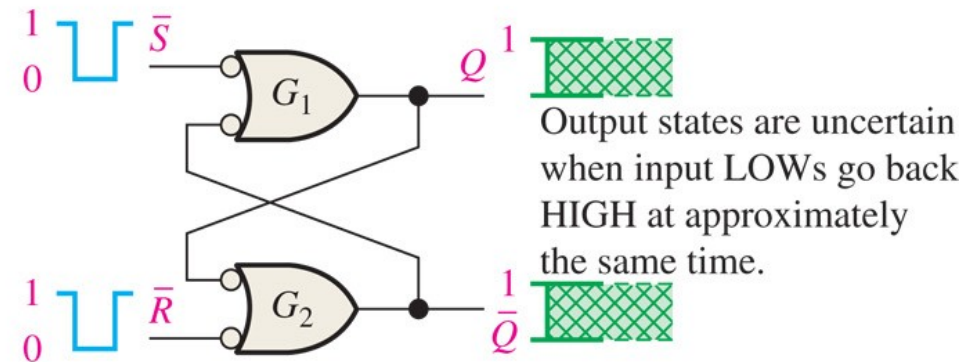
Simultaneous LOWs on both inputs

(d) Invalid condition