c) Repeating states: \( 111 \to 011 \to 001 \to 100 \to 110 \to 111 \ldots \)

For a glitch, two variables must change simultaneously.

The only transition which has two variables changing simultaneously is \( 001 \to 100 \). This could could fake \( 101 \) if \( Q_c \) turned off after \( Q_a \) turned on.

Or it could fake \( 000 \) if \( Q_c \) turned off before \( Q_a \) turned on. But \( Q_b \) is off the entire time (10, F).

So it can not fake \( 111 = Q_a Q_b Q_c \). No glitch for \( Y = Q_a Q_b Q_c \).

b) Clock period (minimum) = FF delay + gate delay

in longest path from any FF output to any FF input +

+ FF setup time. (External input held fixed).

\[
T_{\text{min}} = 30\,\text{ns} + 15\,\text{ns} + 25\,\text{ns} = 70\,\text{ns}
\]

\[
T_{\text{max}} = \sqrt{T_{\text{min}}} = 14\,\text{MHz}
\]