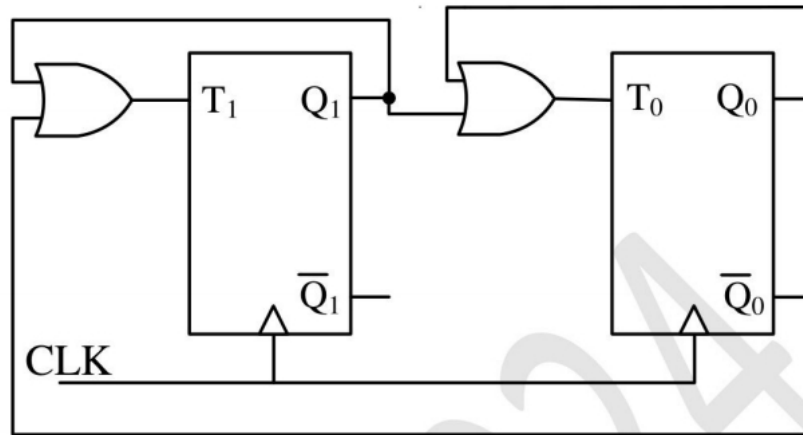1. The sequence of states (Q_1, Q_0) of the given synchronous sequential circuit is _____

(A) $00 \rightarrow 10 \rightarrow 11 \rightarrow 00$

(B) $11 \rightarrow 00 \rightarrow 10 \rightarrow 01 \rightarrow 00$

(C) $01 \rightarrow 10 \rightarrow 11 \rightarrow 00 \rightarrow 01$

(D) $00 \rightarrow 01 \rightarrow 10 \rightarrow 00$