

# GATE CS 2023

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1. Consider a sequential digital circuit consisting of T flip-flops and D flip-flops as shown in the figure. CLKIN is the clock input to the circuit. At the beginning, Q1, Q2 and Q3 have values 0, 1 and 1, respectively. (GATE CS2023,43)

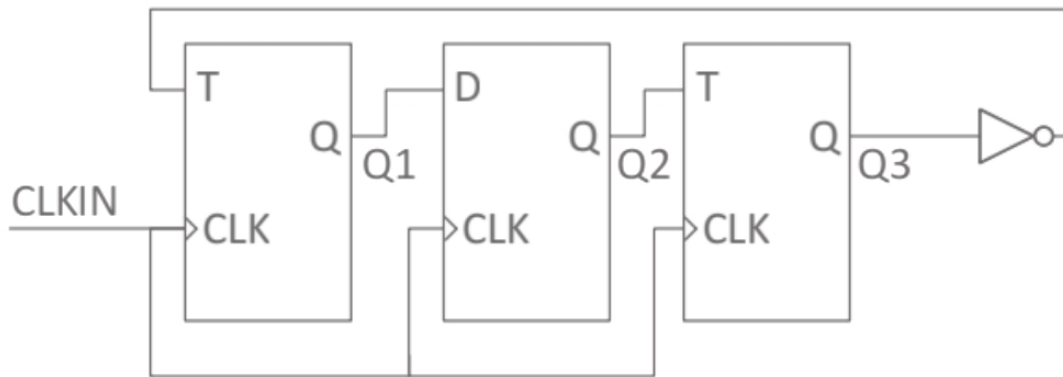


Figure 1: Flip Flops

Which of the given values of (Q1, Q2, Q3) can NEVER be obtained with this digital circuit?

- (a) (0, 0, 1)
- (b) (1, 0, 0)
- (c) (1, 0, 1)
- (d) (1, 1, 1)