

ASSIGNMENT 11

Presentation On State Transition Diagram

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1 Question

- options

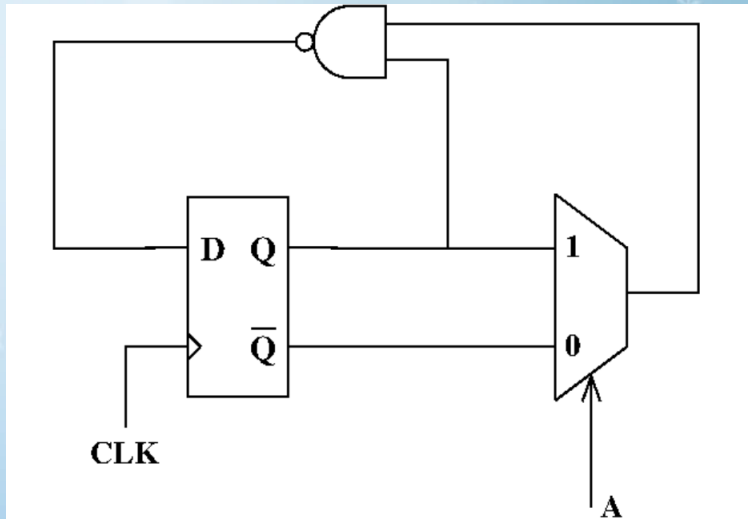
2 Answer

- multiplexer
- D flip flop
- truth table
- state transition diagram



Question

The state transition diagram for the following circuit is:



Options

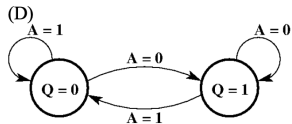
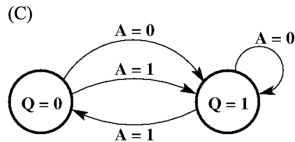
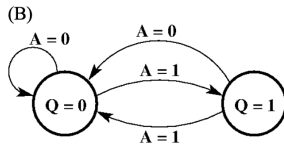
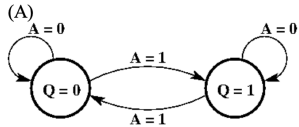


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1 Question

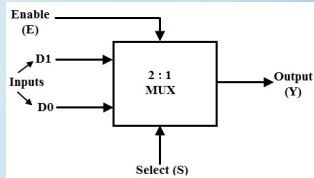
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2 Answer

- multiplexer
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multiplexer



There are total 5 types of multiplexer it varies in no of inputs

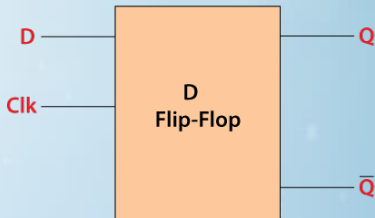
It is also known as Data Selector

The relation between selector and no of inputs is ($s = \log_2 n$)

if the selector(A) is 0 then the output will be 1 similarly the other therefore, output y can be 1 or 0



D flip flop



The memory element in a sequential circuit is called as a flip flop from the question $D = \overline{Q.y}$



clk	D	Q	\overline{Q}
1	0	0	1
1	1	1	0

1) so let us take $Q = 0$ when the selector $A = 0$, $y = 1$

$$= 1 + 0 = 1$$

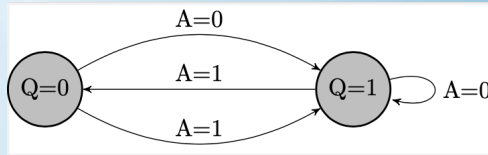
then $D = 1 + 1 = 1$

then $D = 0 + 0 = 0$

then $D = 0 + 1 = 1$



state transition



the diagram itself explains, the $Q = 0$ state opens door and the transition goes to state $Q = 1$

similarly the transition goes from state $Q = 1$ to $Q = 0$ when the transition condition is $A = 1$.



Thank you.

