

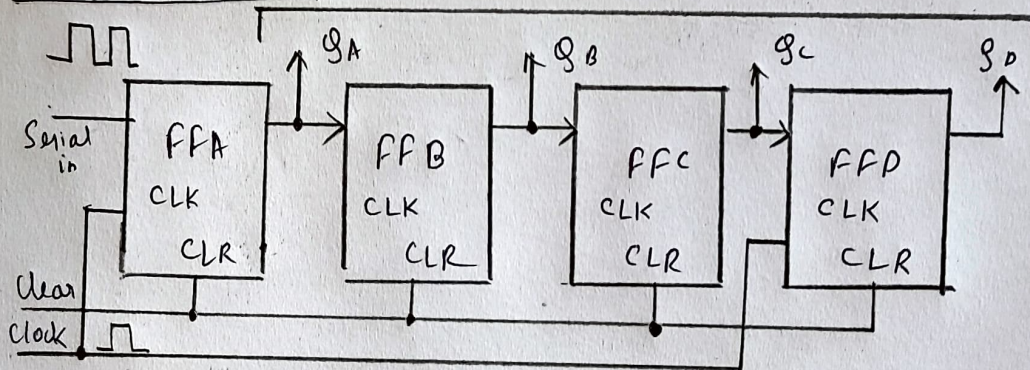
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Question - 23

Implement Serial Input Parallel Output shift registers in the Multisim software and determine the binary value of the output at 2nd clock pulse for the serial input 1001 (first bit) - start from right most bit.

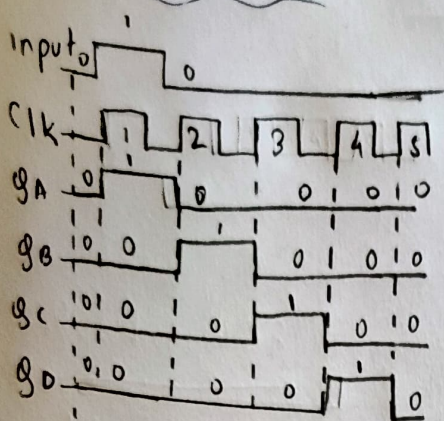
AIM:- To implement Serial Input Parallel Output (SIPO) Shift Registers in the Multisim software ^{using flip flop} and to determine the binary value of the given serial input.

CIRCUIT DIAGRAM:-



4-bit Serial in to Parallel-Out Shift Register

Data Movement :-



SIPO Data movement Diagram (Graph)

PROCEDURE :-

- We first log into Multisim platform
- We use the built-in D Flip Flop link and connect 4 such flip flops adjacently.
- We connect the LEDs at the output terminals
- We connect ground for the 'Reset' pin
- Then we connect them all ~~and~~ by using ~~the~~ Digital switch.
- We give input using the Digital Switch itself.
- When the switch is 'ON', logic will come as '1' and ~~that~~ subsequent LED will glow. If the switch is 'off', the logic will come '0' and that subsequent switch will not glow.
- Using this procedure, we go to the grapher and check the output too.

PIN DIAGRAM :-

