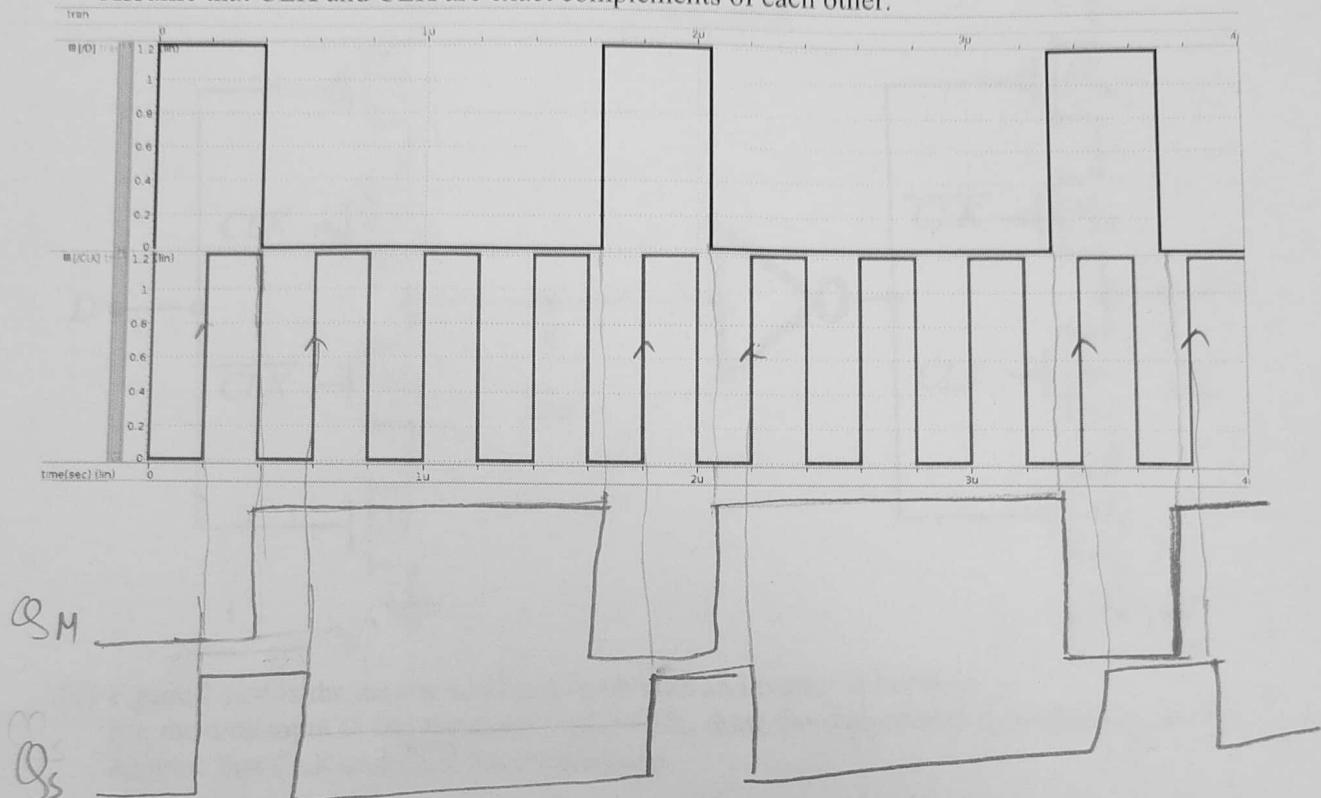
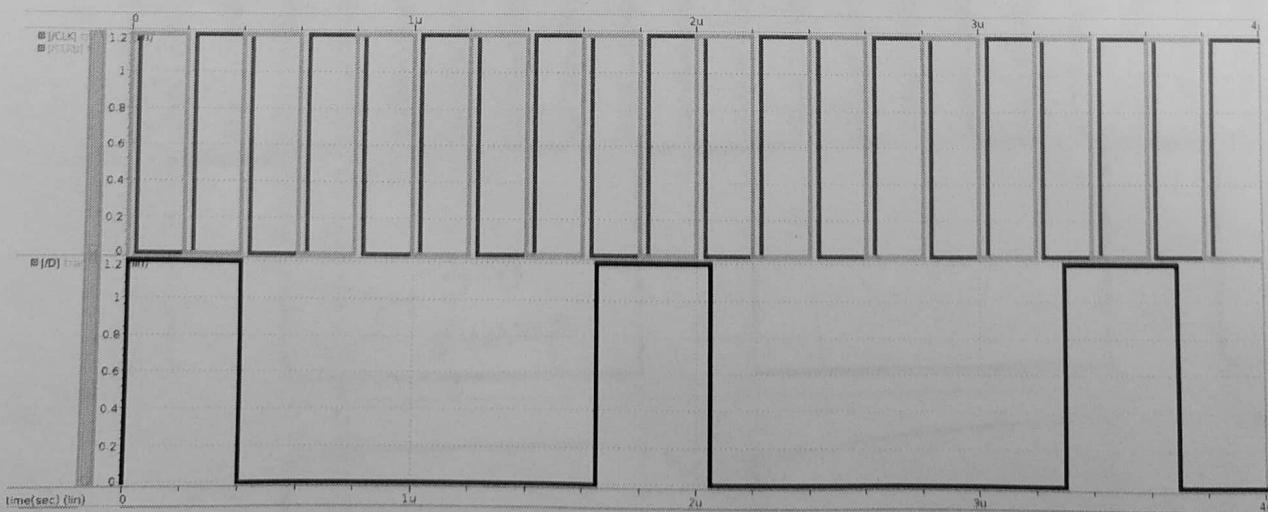


Complete the timing diagrams below for the schematic.

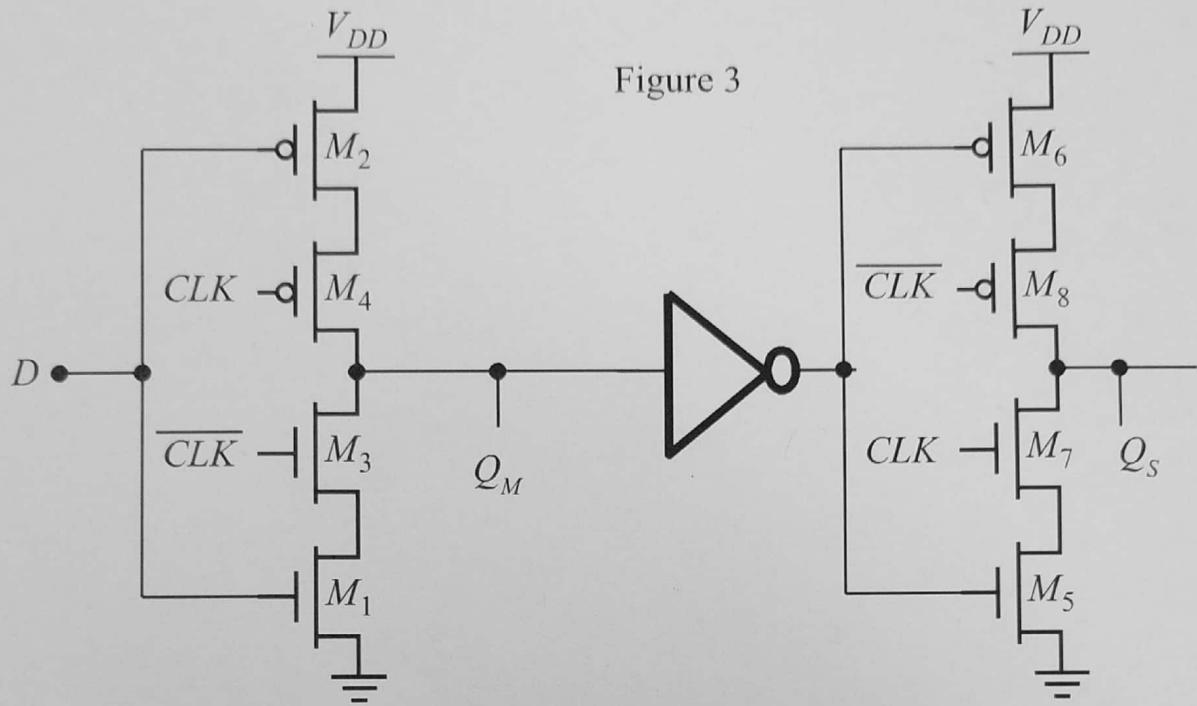
- (a) For the data input D and the clock signal CLK, draw the corresponding outputs Q_M and Q_S .
Assume that CLK and \overline{CLK} are exact complements of each other.



- (b) For the data input D and the clock signal CLK, draw the corresponding outputs Q_M and Q_S .
This time assume that CLK and \overline{CLK} have an overlap. CLKB is the same as CLK in Figure 1.



Same as (a). CMOS is immune to
clock overlaps.



- (c) Figure 3 shows the master and slave latch with an inverter in between.
For the data input D and the clock signal CLK, draw the corresponding outputs Q_M and Q_S .
Assume that CLK and \overline{CLK} have an overlap.

