Reading Quiz 6

1. **Describe how the Q and Q' outputs of an RS latch retain information.**

   By having Q and Q' feed into opposing Nor gates.

2. **Explain why a DFF's output is equal to what it's input was one unit of time ago (why does out(t) = in(t-1)?). Hint: can you think of an illustrative metaphor?**

   Bacause the current output feeds back as the input in the next time step. (not sure of any metaphor)

3. **What does it mean for a flip-flop to be level-triggered?**

   Level-triggered means that the flip-flop saves the value of the Data input when the Hold That Bit input is at a particular level.

4. **What does it mean for a flip-flop to be edge-triggered?**

An edge trigger causes the outputs to change only when the Clock makes a transition from 0 to 1.

1. **How does a frequency divider get its name?**

   Because the frequency of the Q output is half that of the oscillator.

2. **Do you enjoy converting decimals to binary?**

   No

3. **Do you enjoy reading really long sequences of zeroes and ones?**

No

4. **What is it about the hexadecimal system that makes it a good 'fit' for representing bytes?**

   Each byte requires 2 hexadecimal digits.

5. **Convert 19CFh to binary.**

   1100111001111