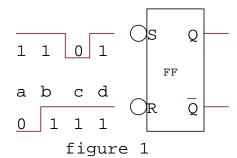
Flip Flops Pretest

- 1. The basic building block for sequential logic circuits is the ______.
- 2. List all Asynchronous flip-flops covered in this chapter:
- 3. List all Synchronous flip-flops covered in this chapter:

Refer to Figure 1 for questions 4-11.

- 4. During pulse a of the FF, output Q is at logical $\underline{\hspace{1cm}}$ & output \overline{Q} is at logical $\underline{\hspace{1cm}}$.
- 5. During pulse b of the FF, output Q is at logical $\underline{\hspace{1cm}}$ & output \overline{Q} is at logical $\underline{\hspace{1cm}}$.



- 6. During pulse c of the FF, output Q is at logical $\underline{\hspace{1cm}}$ & output \overline{Q} is at logical $\underline{\hspace{1cm}}$.
- 7. During pulse d of the FF, output Q is at logical $\underline{\hspace{1cm}}$ & output \overline{Q} is at logical $\underline{\hspace{1cm}}$.
- 8. The FF is in the *set* mode of operation during pulse(s) _____ (list all that apply).
- 9. The FF is in the *reset* mode of operation during pulse(s) _____ (list all that apply).
- 10. The FF is in the *hold* mode of operation during pulse(s) _____ (list all that apply).
- 11. This FF is called a _____flip-flop.

Refer to Figure 2 for **questions 12-19**.

12. During pulse a of the FF, output Q is at logical $\underline{\hspace{1cm}}$ & output \overline{Q} is at logical $\underline{\hspace{1cm}}$.

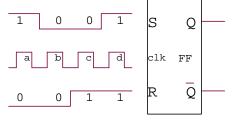


Figure 2

- 13. During pulse b of the FF, output Q is at logical $\underline{\hspace{1cm}}$ & output \overline{Q} is at logical $\underline{\hspace{1cm}}$.
- 14. During pulse c of the FF, output Q is at logical $\underline{\hspace{1cm}}$ & output \overline{Q} is at logical $\underline{\hspace{1cm}}$.
- 15. During pulse d of the FF, output Q is at logical $\underline{\hspace{1cm}}$ & output \overline{Q} is at logical $\underline{\hspace{1cm}}$.
- 16. The FF is in the *set* mode of operation during pulse(s) _____ (list all that apply).
- 17. The FF is in the *reset* mode of operation during pulse(s) _____ (list all that apply).
- 18. The FF is in the *hold* mode of operation during pulse(s) _____ (list all that apply).
- 19. This FF is called a _____flip-flop.

Refer to Figure 3 for **questions 20-27**.

20.	During pulse a of the FF, output Q is at logical	& output \overline{Q} is at logical
21.	During pulse b of the FF, output Q is at logical	Q s at logical Q .
22.	During pulse c of the FF, output Q is at logical	& output \overline{Q} is at logical
23.	During pulse d of the FF, output Q is at logical	& output \overline{Q} is at logical
24.	During pulse e of the FF, output Q is at logical	& output \overline{Q} is at logical
25.	Which of the inputs are asynchronous inputs to the	nis FF:
26.	The flip-flop is in asynchronous mode of operation	on during pulse(s)(list all that apply
27.	This flip-flop is called a flip	o-flop.
	1 1 1 1 0 ps	
	1 0 0 1 1 D Q	1 0 0 1 1 J Q
	a b c d e clk Q	a b c d e clk FF
	0 1 1 1 1 O	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	Figure 3	1 0 1 1 1
Ref	er to Figure 4 for questions 28-38.	Figure 4
28.	During pulse a of the FF, output Q is at logical	$\underline{\hspace{1cm}}$ & output Q is at logical $\underline{\hspace{1cm}}$.
29.	During pulse b of the FF, output Q is at logical	$\underline{\hspace{0.5cm}}$ & output \overline{Q} is at logical $\underline{\hspace{0.5cm}}$.
30.	During pulse c of the FF, output Q is at logical	& output \overline{Q} is at logical
31.	During pulse d of the FF, output Q is at logical	& output \overline{Q} is at logical
32.	During pulse e of the FF, output Q is at logical	& output \overline{Q} is at logical
	This flip-flop is called a flip	
	The mode of operation at the end of pulse a is	
	The mode of operation at the end of pulse b is The mode of operation at the end of pulse c is	
	The mode of operation at the end of pulse d is	
	The mode of operation at the end of pulse e is	
39.	A FF in the Reset mode produces a logical	at Normal output Q and a at \overline{Q} .
40.	A FF in the Set mode produces a logical at	Normal output Q and a \overline{Q} .
41.	A FF in the Prohibit produces a logical at 1	Normal output Q and a \overline{Q} .
42	A FF in the Toggle mode produces a st No	ormal output Ω and a $\overline{\Omega}$