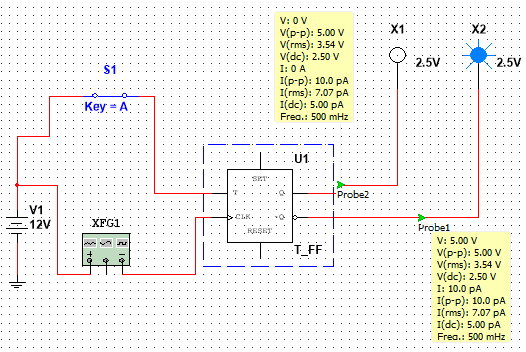
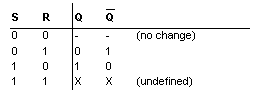
**EXPT NO. 11**

**FLIP-FLOP CIRCUITS**

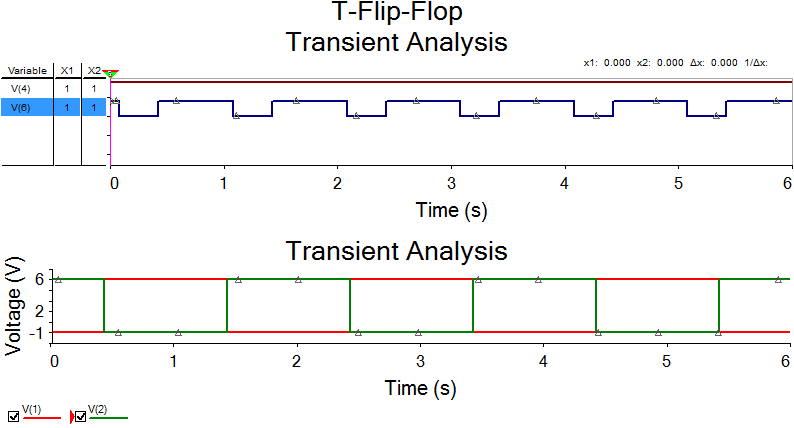
1. **T – FLIP FLOP**



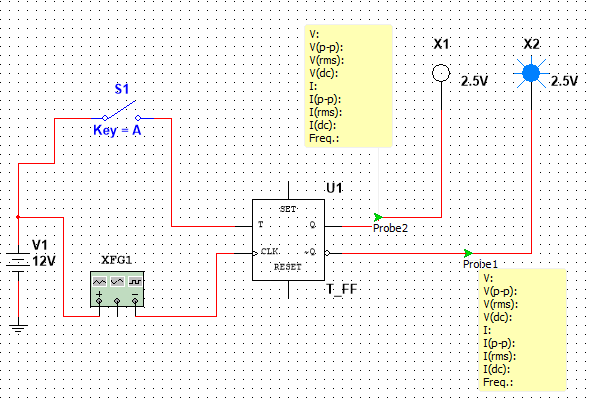
Truth Table:

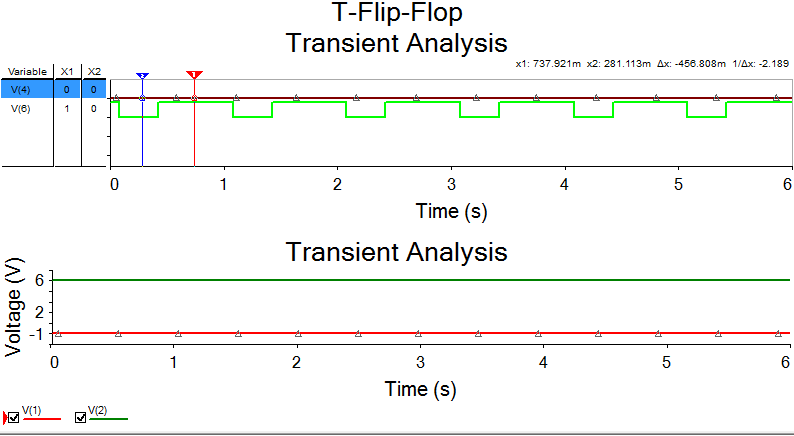


**WITH KEY CLOSED:**

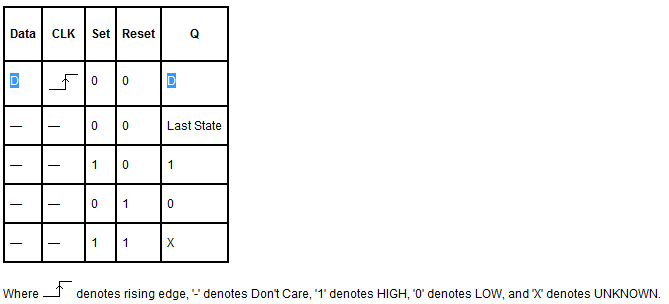


**WITH KEY OPENED:**

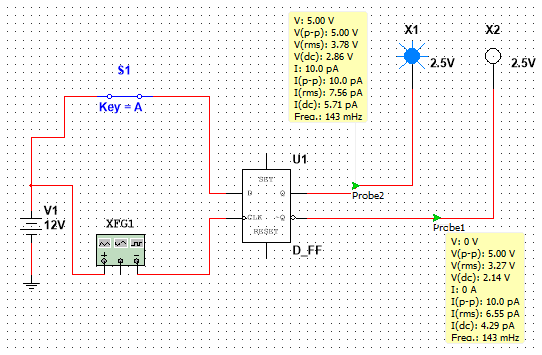


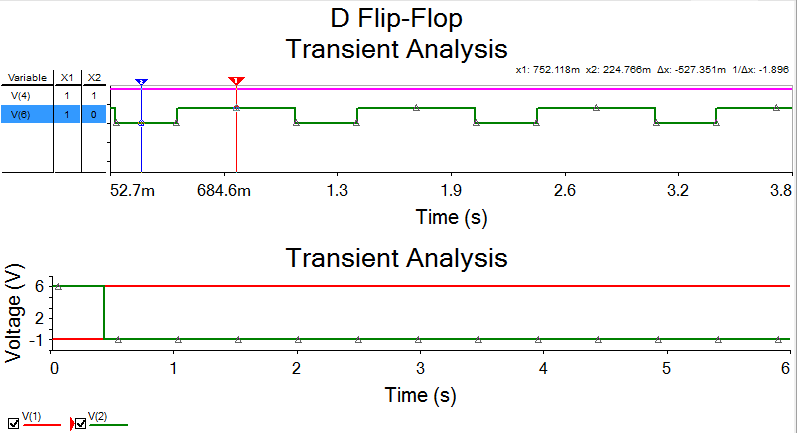


1. **D – FLIP FLOP**

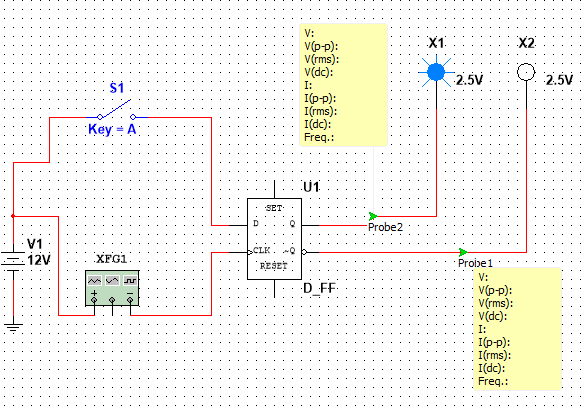


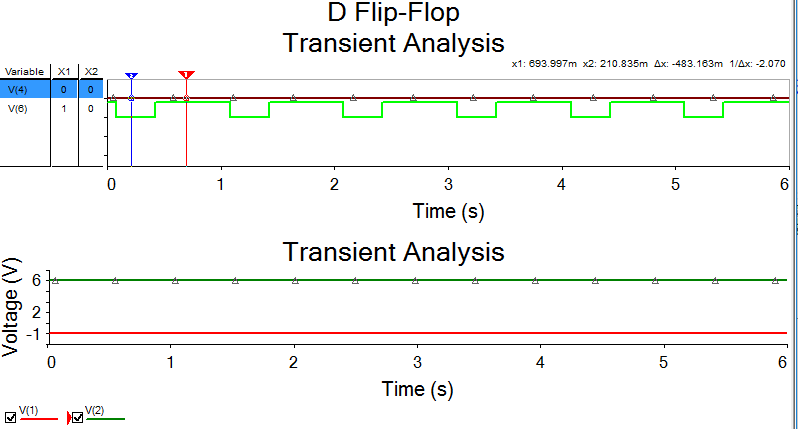
**WITH KEY CLOSED:**





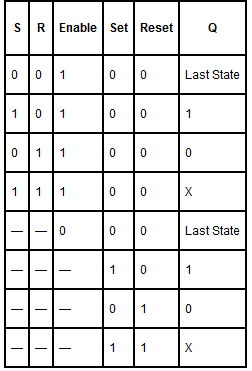
**WITH KEY OPENED:**



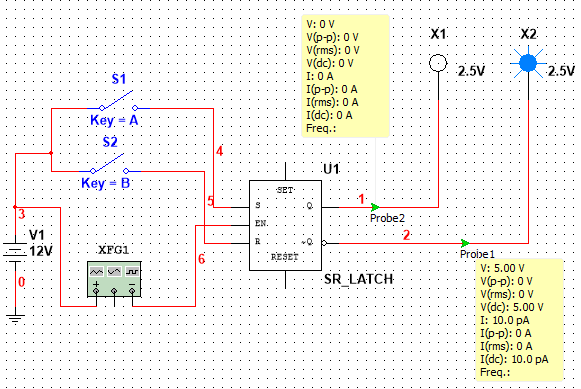


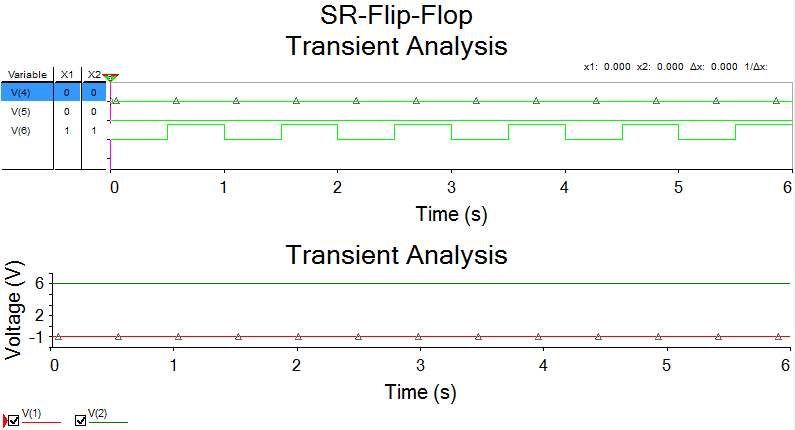
1. **SR – FLIP FLOP**

**TRUTH TABLE**

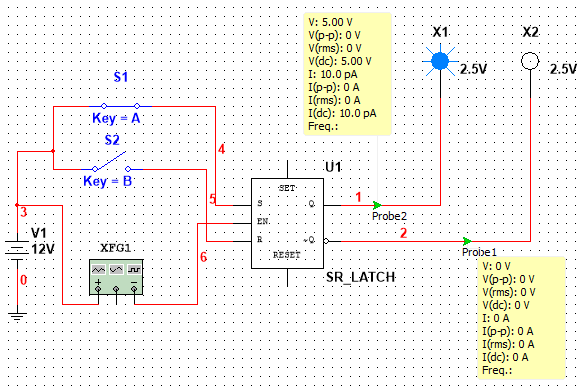


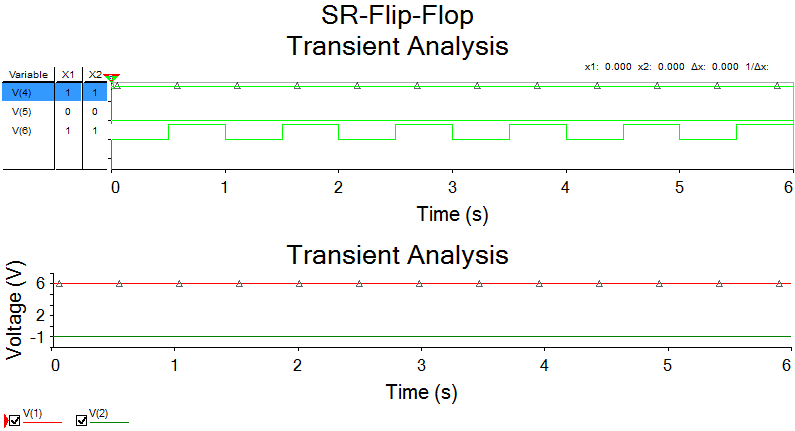
**WITH BOTH KEY OPENED:**



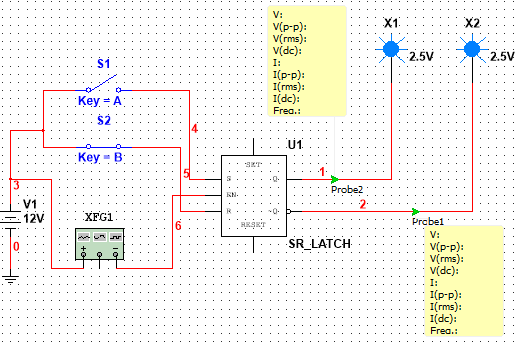


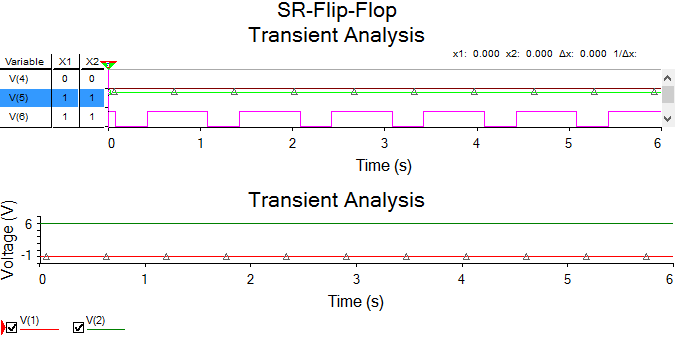
**WITH KEY A CLOSED:**



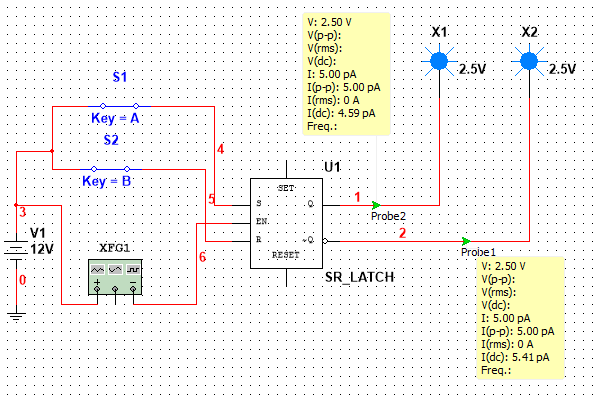


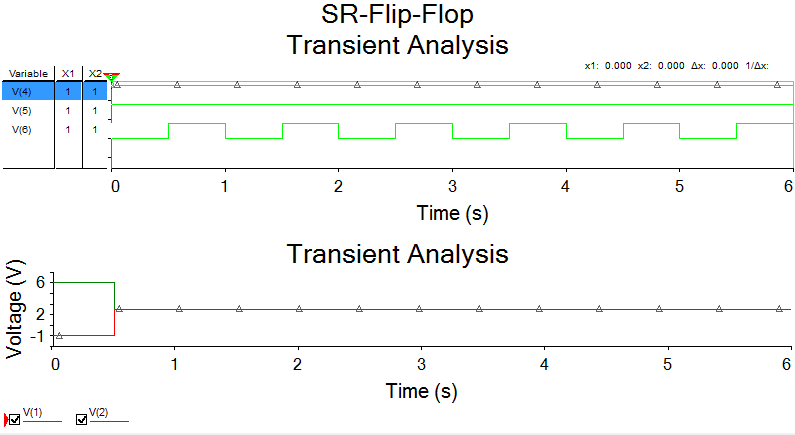
**WITH KEY B CLOSED:**



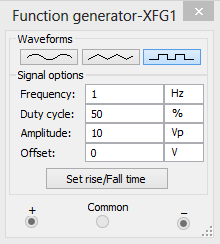
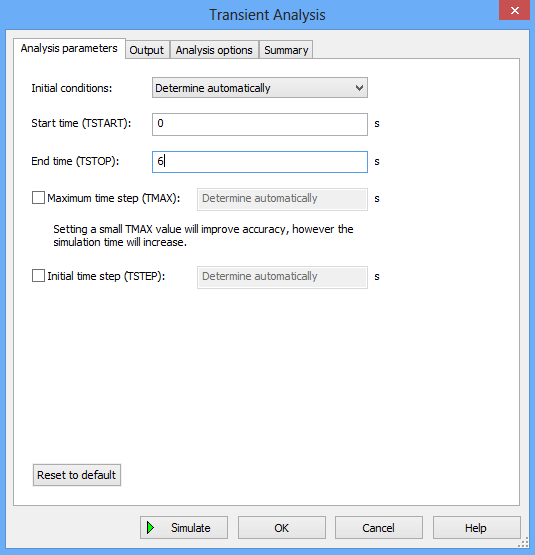


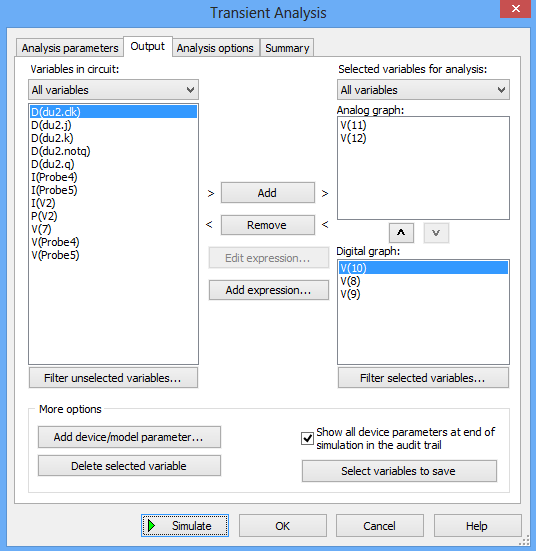
**WITH BOTH KEY CLOSED:**



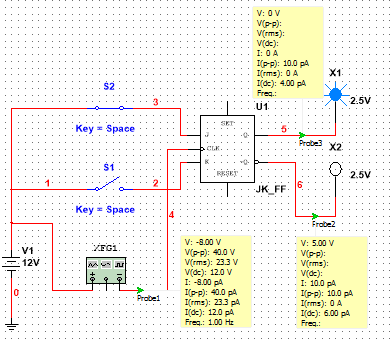


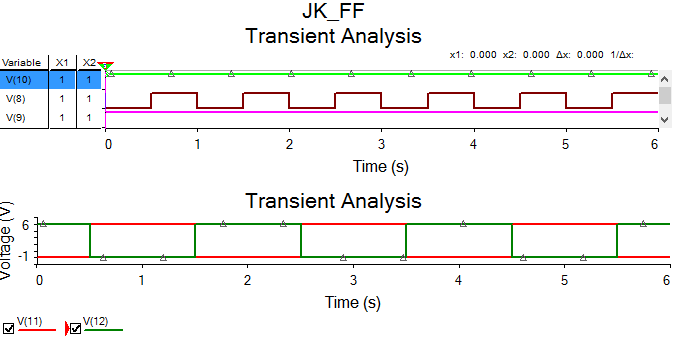
1. Connect the Set and Reset pin of JK\_FF circuit given in fig -1 with S1 and S2 separately and simultaneously. Compare the Input and Output wave forms.

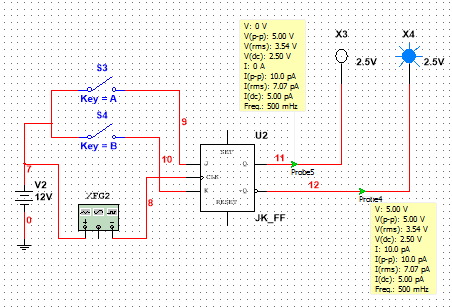
 

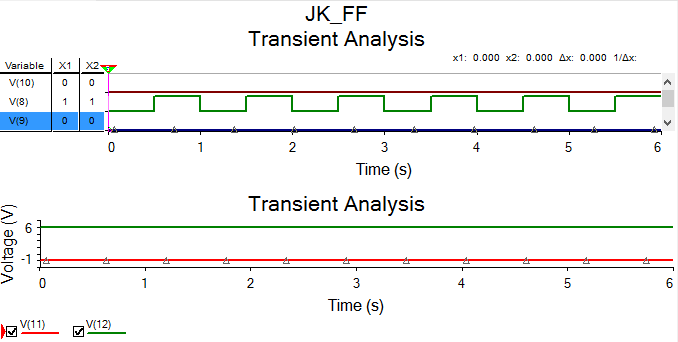


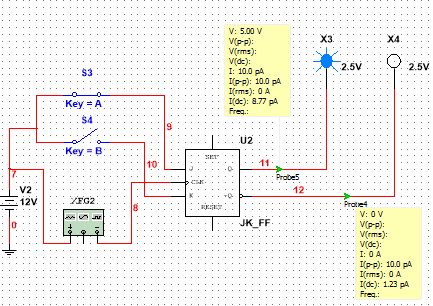
1. **JK– FLIP FLOP**

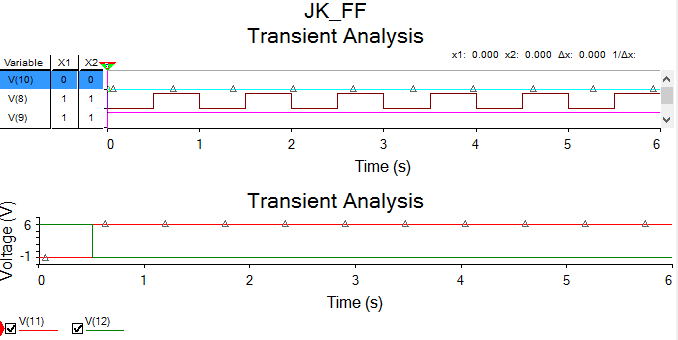


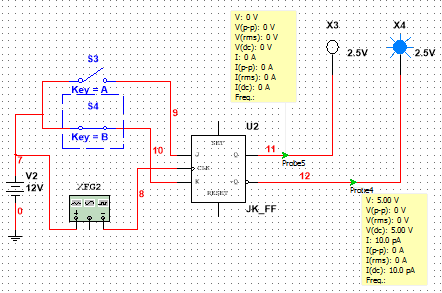


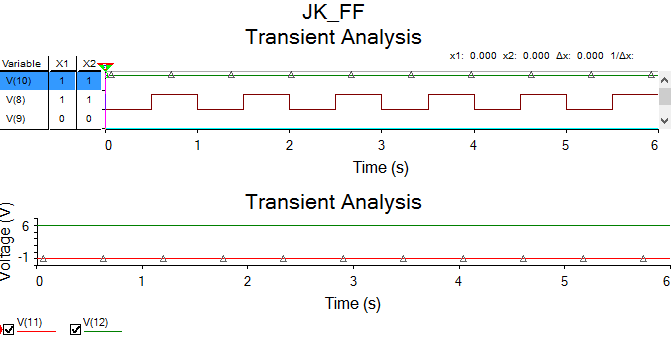












1. Simulate the Input and Output wave forms of Digital counter circuit for counting the no. 3 to 9 and letter A, B, and C with graphical method and using Oscilloscope.

