

The below mentioned waveform represents the Q-register inputs and outputs which is a part of the Paplinski's word serial multiplier  
Q-register is a sequential circuit whose output depends on the clock signal, the signals op\_tb, QQ\_tb, f0\_tb, q\_1\_tb as inputs and the signals Qn\_1\_tb, q0\_1\_tb is the output.  
When the clock even is rising and Qop = '0' there will be no load and if Qop = '1' it will shift to the next bit and if Qop = '2' & '3' the output is added and

