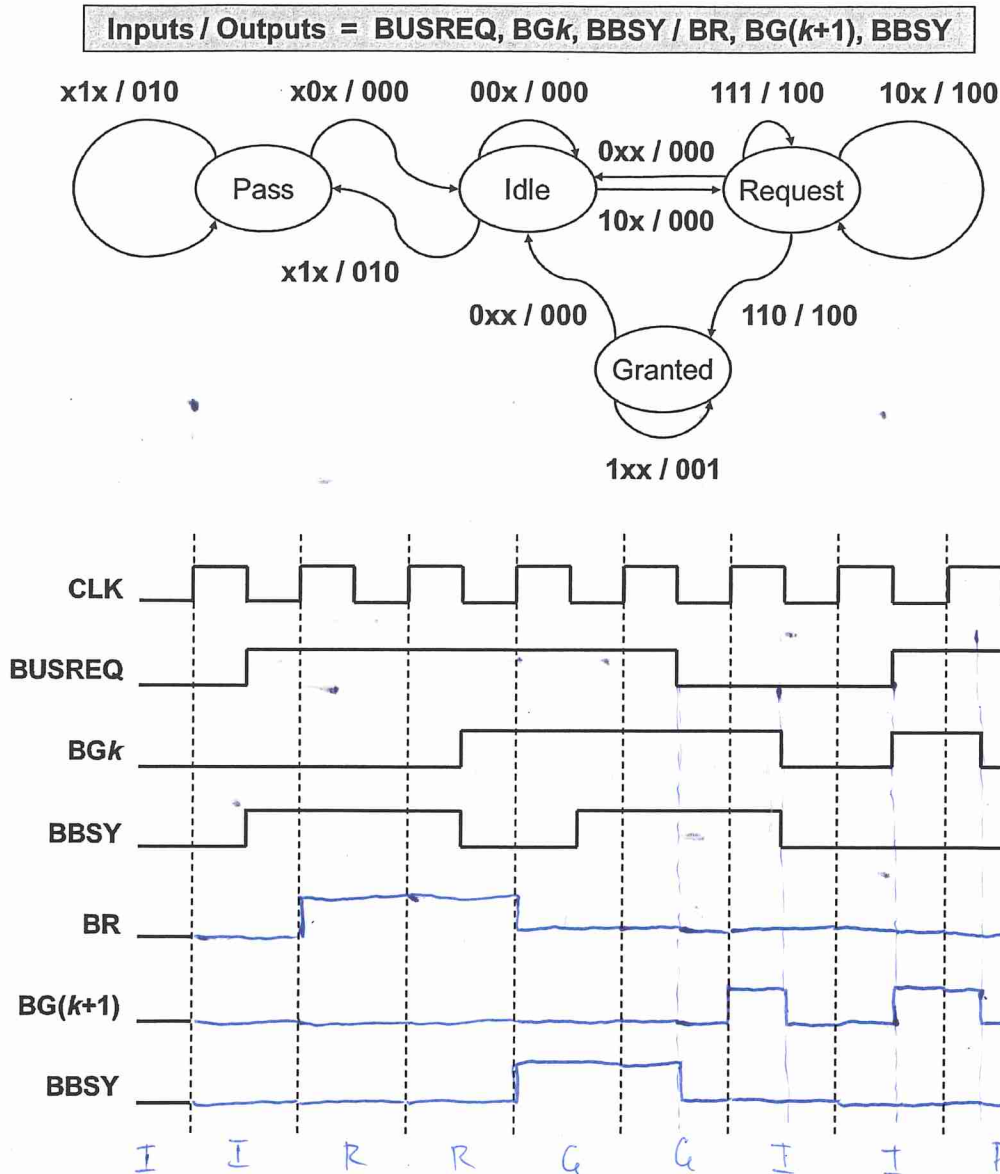


8. [5 points] Consider the Mealy FSM state diagram of some daisy-chain device as shown below, where **x** represents **don't-care**. Given the input waveforms shown below, draw the corresponding output waveforms, assuming that the FSM is initially in state **Idle**.



9. [10 points] Consider the daisy-chain arbitration scheme shown below. Assume that the input-to-output signal propagation delays are the same and equal to **d** for all three devices, the inverter, and the **AND** gate. Requesting device **x** is able to start using the bus (making **/BR_x = 1** and **/BBSY = 0**) only when it receives a 0-1 transition on its bus-grant input **BG_x** and detects that the bus is not currently busy (i.e., **/BBSY = 1**). Device **x** lets the bus-grant propagate through only when it is neither requesting nor using the bus. Assume that any of the three devices will use the bus (when granted) for 3d time units. Complete the timing diagram shown on the next page.