

1996 Paper 11 Question 12

Digital Electronics

Design a synchronous sequential circuit with one input and one output which produces an output $X = 1$ whenever any of the following input sequences occur: 1100, 1010 or 1001. The circuit resets to its initial state after a 1 output has been generated.

(a) Draw a state diagram and provide a transition table. [10 marks]

(b) Choose an assignment and show the control factors for JK flip flops. [10 marks]