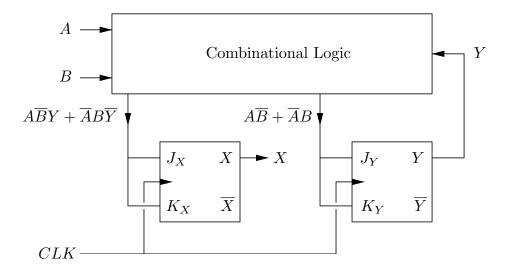# 2002 Paper 2 Question 3

Digital Electronics

Consider the following circuit with clock CLK, inputs A and B and outputs X and Y.

(a) How many states does this system have?   [2 marks]

(b) How many rows will there be in a state transition table?   [2 marks]

(c) Provide the state transition table.   [8 marks]

(d) Draw a state diagram of the system.   [6 marks]

(e) Describe what the circuit does in words.   [2 marks]