

**KING FAHD UNIVERSITY OF PETROLEUM & MINERALS**  
**Department of Electrical Engineering**

<b>EE200 Digital Logic Circuit Design</b>	<b>Quiz #7 (31/12/2005)</b>	<b>Section: 03</b>
<b>Student's Name :</b>		<b>I.D.# :</b>

Derive the state table and the state diagram of a sequential circuit with two JK flip flops, A, and B, one input x and one output y. The circuit is described by the following flip flop input functions:

$$\begin{aligned} J_A &= B \oplus x & K_A &= Bx' \\ J_B &= A & K_B &= A'x \\ y &= AB'x + A'x' \end{aligned}$$

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Do not write below this line