This is a **open** book/note quiz.

**NO** texting a friend, phoning a friend, talking to a class mate, or such is allowed.

(10 points) For the following state table use an implication chart to find the minimum number of states. Construct this minimal table (if the one below is not minimal). SHOW YOUR WORK.

The state machine has one input x and one output y.

|  |  |  |  |
| --- | --- | --- | --- |
| Present State | Next State x=0 | Next State x=1 | Output y |
| A | B | C | 0 |
| B | B | C | 0 |
| C | D | A | 1 |
| D | E | E | 1 |
| E | A | A | 0 |

Implication chart and reduced state table.

 

 

Reduced state table

The state machine has one input x and one output y.

|  |  |  |  |
| --- | --- | --- | --- |
| Present State | Next State x=0 | Next State x=1 | Output y |
| A | A | C | 0 |
| C | D | A | 1 |
| D | E | E | 1 |
| E | A | A | 0 |