Name: ______________________________ Student ID:

Math 166 - Theory of Computability - Fall 1999

Quiz #2 — October 14

1. Let M be the DFA with state diagram shown here:

   (a) What is the start state of M?

   (b) What are the accepting state(s) of M?

   (c) Is the empty string ε accepted by M?

   (d) Is the string bac accepted by M?

   (e) Give two examples of strings that M accepts (different from ε and bac).

   (f) Give two examples of strings that M does not accept (different from ε and bac).

   (g) Give the formal definition of M as a 5-tuple $(Q, \Sigma, \delta, s, F)$, specifying *completely* the components of the 5-tuple.