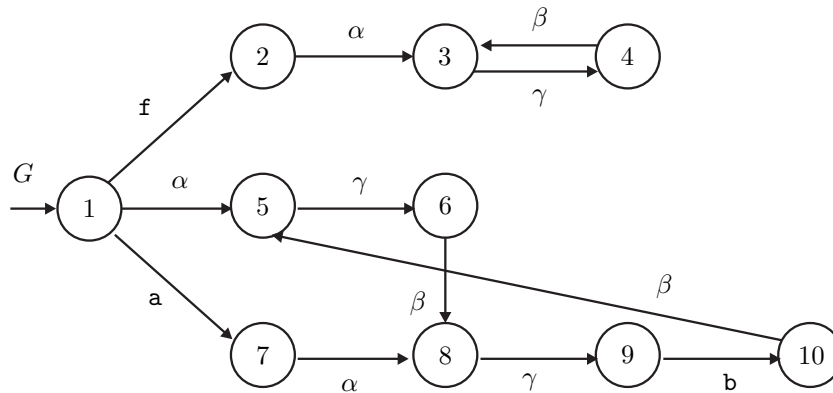## Exercise Sheet 2: Event-Diagnosis

Problem 4:

The following automaton G is given with the observable events $\Sigma_o = \{\alpha, \beta, \gamma\}$.

   a. Compute the diagnoser automaton D for G and Σ_o

   b. Is the fault event f diagnosable for G and $p : \Sigma^\star \to \Sigma_o^\star$?

Problem 5:

Assume an automaton G with observable events Σ_o is given. Show that if the diagnoser D for G and Σ_o has a cycle of uncertain states, then you can always construct a corresponding cycle in G by using only entries with the N label in the states of D.

Important note: In the lecture, we saw that it is not always possible to construct a corresponding cycle in G using only entries with the F label in the states of D!