

Gate : EC-2020,39

February 5, 2024

1. The state diagram of a sequence detector is shown below. state  $S_0$  is the initial state of the sequence detector. If the output is 1, then (GATE-EC2020,39)

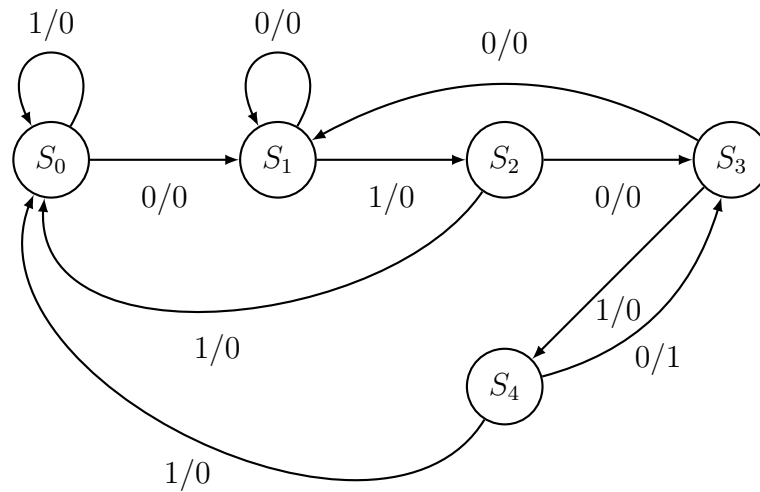


Figure 1: State diagram of a sequence detector

- (a) the sequence 01010 is detected.
- (b) the sequence 01011 is detected.
- (c) the sequence 01110 is detected.
- (d) the sequence 01001 is detected.