Description

Instructions

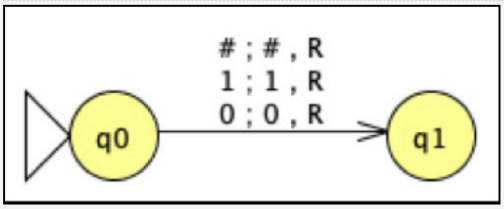

Figure 1: Turing Machine

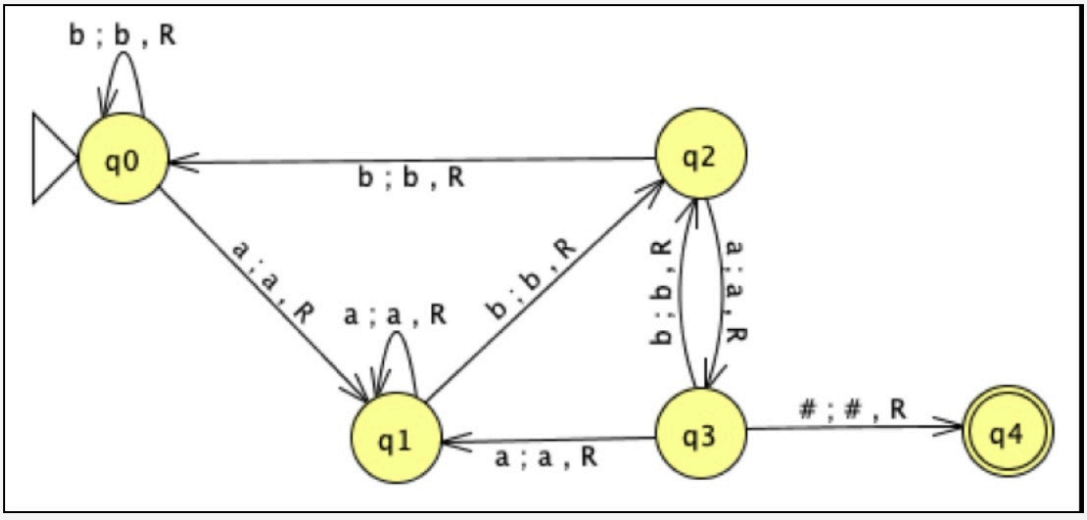

Figure 2: Turing Machine

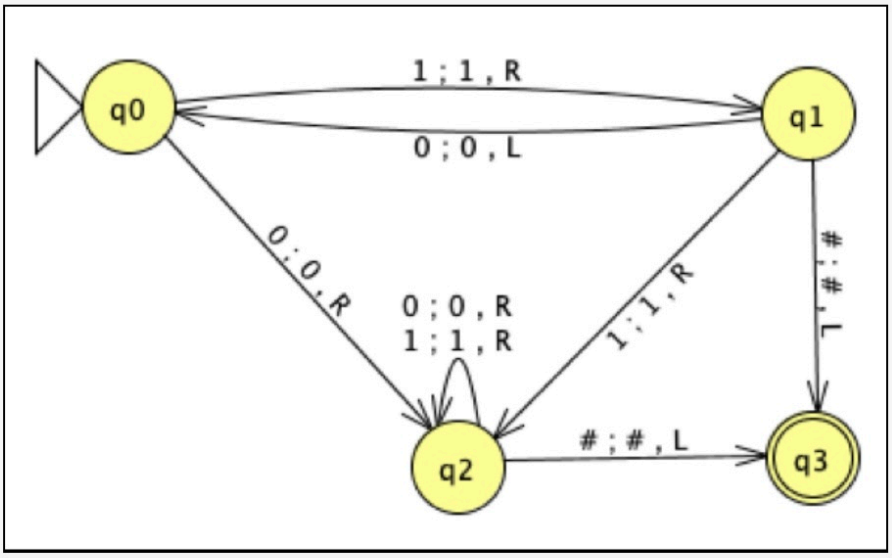

Figure 3: Turing Machine

QUESTION 1

Every non-deterministic Turing machine has an equivalent deterministic Turing machine.

- (●) True
- ( ) False

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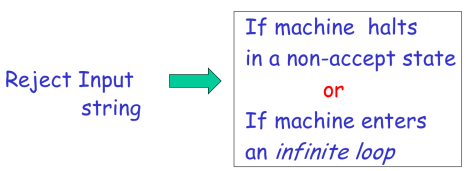
QUESTION 2

The only way for a Turing machine to reject a string is to halt on a non-accepting state.

- ( ) True
- (●) False



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QUESTION 3

Standard Turing Machine are re-programmable.

- ( ) True
- (●) False

QUESTION 4

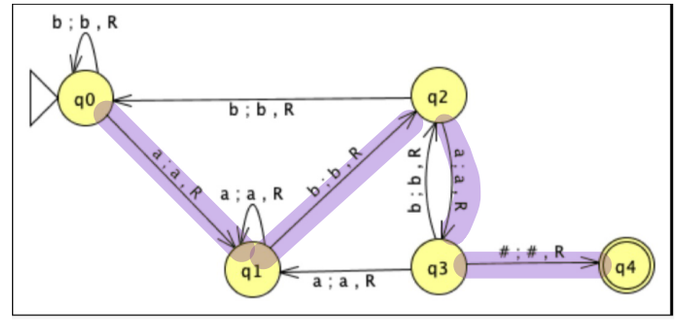
Consider the Turing machine in **Figure 1**, the language decided by M is:

- I. $\{0\}$
- II. $\varnothing$
- III. $\varnothing^*$
- IV. $\{\lambda\}$

0.5 points Saved

QUESTION 5

Consider the Turing machine in **Figure 2**, the language decided by M is:

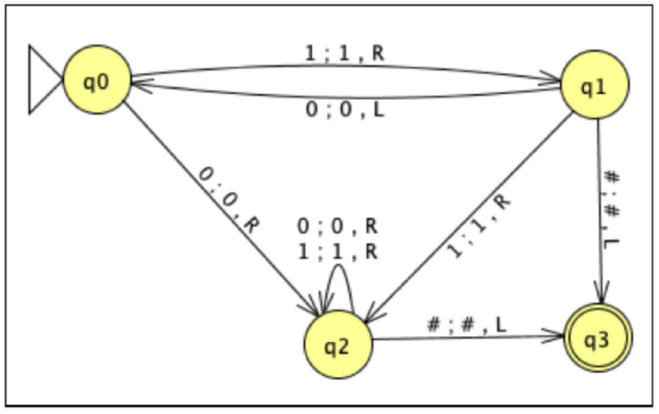


- I. $(a+b)^*a^*b^*$
- II. $(a+b)^*bab$
- III. $(a+b)^*aba$
- IV. $a^*b^*(a+b)$

1 points Saved

QUESTION 6

Consider the Turing machine in **Figure 3**, suppose the current configuration is $\#1q_1 0100\#$. The next configuration will be:



- I. $\#10q_0 100\#$
- II. None
- III. $\#10q_2 100\#$
- IV. $\#q_0 10100\#$

0.5 points Saved

QUESTION 7

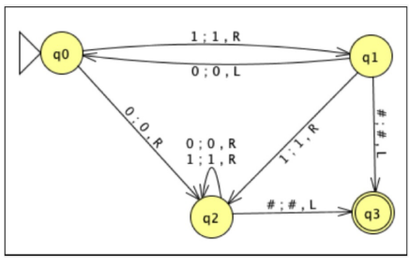
Consider the Turing machine in **Figure 3**, the string 10100 will be accepted.

- True
- False

0.5 points Saved

QUESTION 8

Consider the Turing machine in **Figure 3**, which statement is correct?



- I. M does not halt on any input ✗ Halts in accept state: $11(0+1)^* + 0(0+1)^*$
- II. None
- III. M never halts on some inputs ✓ to infinite loop
- IV. M halts on all inputs

0.5 points Save Answer

QUESTION 9

Consider the Turing machine in **Figure 3**, the machine M is a recognizer.

- True
- False

0.5 points ✓ Saved