Quiz 3

Due Sep 11 at 11:59pm   **Points** 6   **Questions** 6

Available Sep 9 at 11:59pm - Oct 5 at 11:59pm   **Time Limit** 30 Minutes

Instructions

Task:

- The quiz should be taken in a closed book environment.

  The questions can be in many formats (Multiple Choice/Multiple answers/Fill in the blanks)

  The quiz should be attempted after completing the weekly Assignment to give more preparation.

  These short activities will give a feedback about the understanding of the material at hand.

  Even though these are time bound, I have allocated enough time for each question.

  This a weekly quiz to be completed by Sunday of the week.

  Check your quiz score and the correct answers after Monday following the quiz.

  ### *Assignment scoring*

  - *Each of the assignments will yield 6 points.*
  - *Note the assignments put together account for 25% of the grade.*
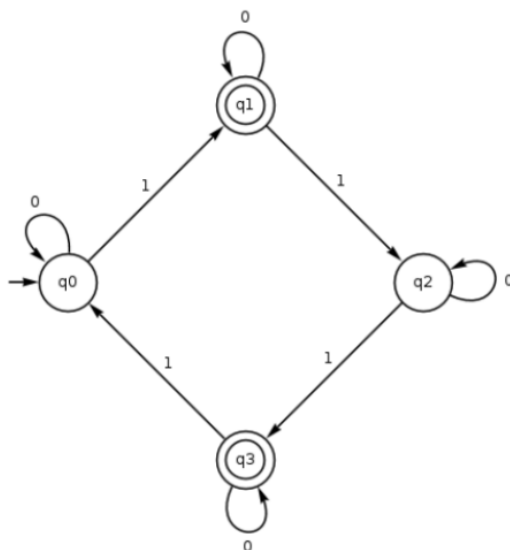
Attempt History

	Attempt	Time	Score
LATEST	[**Attempt 1**](#)	18 minutes	5 out of 6

Score for this quiz: **5** out of 6

Submitted Sep 11 at 4:49pm

This attempt took 18 minutes.

Question 1	1 / 1 pts

Which of the following strings are accepted by the above DFA?

Correct!

☑ 1000

Correct!

☑ 1110

Correct!

☑ 1101

☐ 0101

☐ 1010

Question 2

1 / 1 pts

Which of the following statements are true about the languages accepted by a DFA?

A: Language is always finite.

B: Language is always infinite.

C: Language can be finite or infinite

D: language cannot contain λ

Correct!

- ☑ C

- ☐ A

- ☐ B

- ☐ D

Question 3   1 / 1 pts

Deterministic Finite Automaton (DFA) is defined as a 5 tuple:

Q ==> a finite set of states

∑ ==> a finite set of input symbols (alphabet)

q_0 ==> a start state start state

F ==> set of final states

δ ==> a transition function, which is a mapping accurately defined by which of the following:

A: Q x ∑ -> F

B: Q x ∑ -> Q

C: Q x ∑ -> Subset of Q

D: None of the above

Correct!

- ◉ B

- ○ C

- ○ A

- ○ D

Question 4   1 / 1 pts
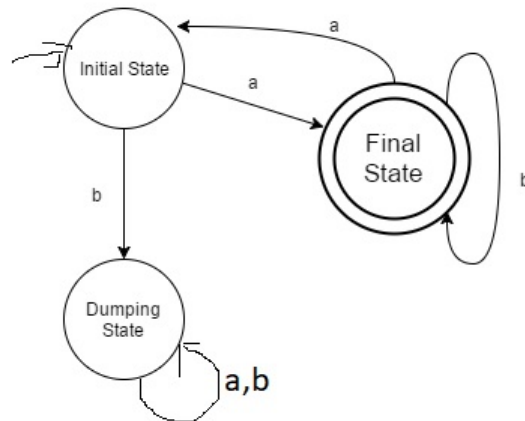
Which of the following strings is **not** accepted by the DFA

I) ababaabaa
II) abbbaa
III) abbbaabb
IV) abbaabbaa

Correct!

- [x] I

- [ ] II

- [ ] III

- [ ] IV

Question 5   1 / 1 pts

Consider the DFA with the transition table described below.

The initial state is q_0.   The final states are q_0 and q_3

	0	1
q_0	q_1	q_0
q_1	q_3	q_2
q_2	q_3	q_0
q_3	q_3	q_3

Which of the following strings are accepted by the DFA

Correct!

☑ 010

Correct!

☑ 011

Correct!
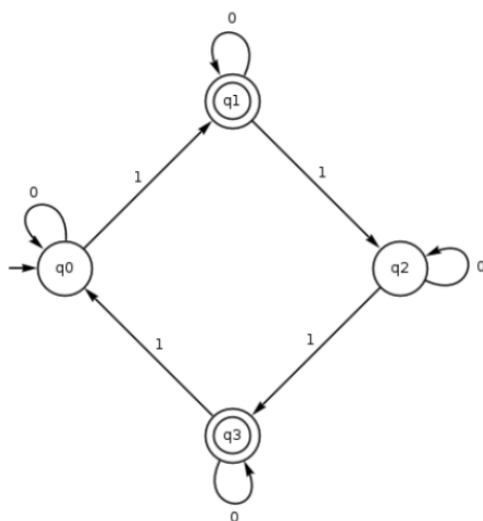
☑ Null string

☐ 101

☐ 110

Question 6   0 / 1 pts

What is $\delta^*(q0,100101)$?

A: q_2 B: q_3 C: $\{q_1,q_3\}$ D: q_2 E: q_1

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orrect Answer   ○ B

○ A

ou Answered   ◉ C

○ D

○ E

Quiz Score: **5** out of 6