Quiz 4

Due Sep 18 at 11:59pm **Points** 6 **Questions** 6
Available Sep 15 at 11:59pm - Oct 5 at 11:59pm **Time Limit** 30 Minutes

Instructions

- The quiz should be taken in a closed book environment. Complete the quiz in 30 minutes
  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*

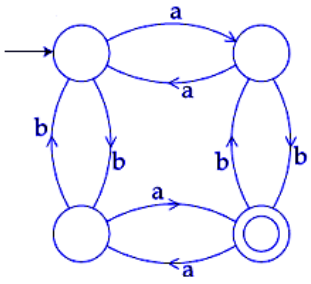
Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	29 minutes	4 out of 6

Score for this quiz: **4** out of 6
Submitted Sep 18 at 5:42pm
This attempt took 29 minutes.

Question 1	**0 / 1 pts**

The finite state machine given in figure below recognizes :



A Any string of odd number of a's

B Any string of odd number of b's

C Any string of even number of a's and odd number of b's

D Any string of odd number of a's and odd number of b's

B

A

orrect Answer D

ou Answered C

Question 2

1 / 1 pts

All Regular languages are described by a DFA or NFA

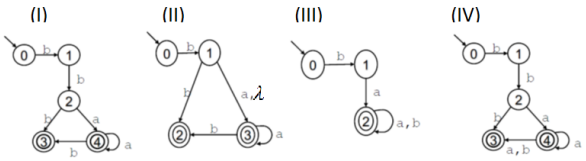
Correct! True

False

Question 3

1 / 1 pts

Which of the following can be classified as a DFA? (A DFA need not be completely defined with a trap/dead state)

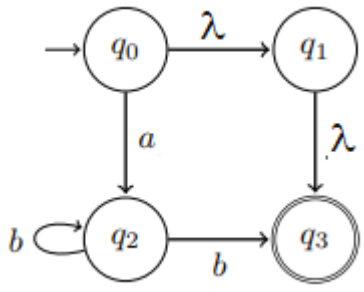


(v) None of the above

- [ ] IV
- [x] (I) — Correct!
- [ ] (II)
- [ ] (V)
- [x] (III) — Correct!

Question 4

0 / 1 pts



When you convert the above NFA to an equivalent DFA, the starting state of the DFA is denoted by the set

I) $\{q_0 , q_1\}$

II) $\{q_0, q_1, q_3\}$

III) $\{q_0, q_3\}$

IV) $\{q_0, q_1, q_2\}$

V) $\{q_0, q_1, q_2, q_3\}$

VI) $\{q_0\}$

orrect Answer

- II

ou Answered

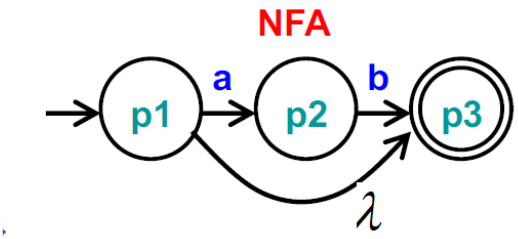
- IV

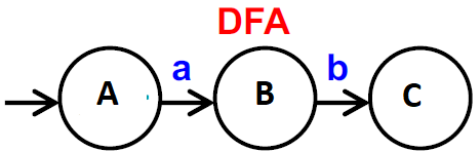
- VI
- III
- I
- V

Question 5

1 / 1 pts

When the NFA is converted to an equivalent DFA as shown below.





Each of the states A,B,C of the DFA correspond to a subset of the NFA states.

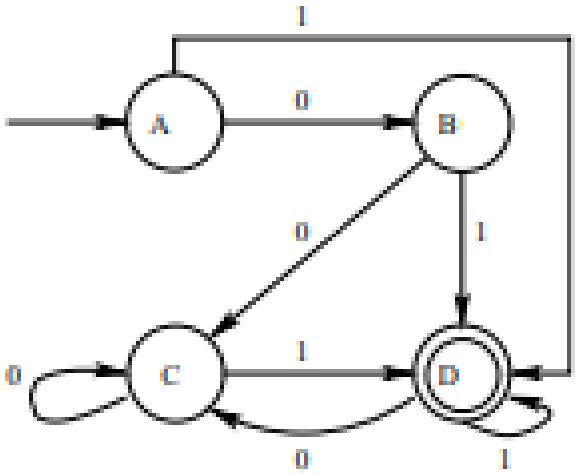
What is the initial state A =

Correct!

- {p1, p3}
- {p1}
- {p2, p3}
- {p1. p2}
- {p1, p2, p3}

Question 6

1 / 1 pts



For the DFA shown above, the minimal DFA has exactly ___ number of states

- 1
- 3
- 4

Correct!

2

Quiz Score: **4** out of 6