

Quiz 5

Due Sep 26 at 11:59pm

Points 6

Questions 6

Available Sep 22 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 | 5 out of 6 |

⚠ Correct answers will be available on Sep 27 at 11:59am.

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

Submitted Sep 25 at 7:04pm

This attempt took 29 minutes.

Question 1

1 / 1 pts

Consider the regular expression

$(a + b)^*a(a + b)^*$

Which of the following string are in this language?

☐ b☐ bbb☒ a☒ ab☒ ba☒ aaa**Question 2****1 / 1 pts**

Which of the following is not a regular expression?

a) $[(a+b)^* - (aa+bb)]^*$

b) $[(0+1) - (0b+a1)^*(a+b)]^*$

c) $(01+11+10)^*$

d) $(1+2+0)^*(1+2)^*$

☐ d☐ c☒ b☐ a**Question 3****1 / 1 pts**

Which one of the following languages over the alphabet $\{0, 1\}$ is described by the regular expression:

$(0 + 1)^*0(0 + 1)^*0(0 + 1)^*$

- A. The set of all strings containing the substring 00.
- B. The set of all strings containing exactly two 0's.
- C. The set of all strings containing at least two 0's.
- D. The set of all strings in the alphabet.

☒ C

☐ B

☐ A

☐ D

Question 4

1 / 1 pts

The set of all strings over the alphabet $S = \{a, b\}$ (including λ) is denoted by

☒ $(b+a)^*$

☐ $a^*(a+b)b^*$

☐ a^*b^*

☒ $(a+b)^*$

Question 5

1 / 1 pts

The string 00 belongs to which of the following languages over $\Sigma = (0,1)$

- A. $(01)^*0$
- B. $01^*0^*(01)^*$
- C. $(1+0)(1+0)^*$
- D. $0^*1^*0^*1^*$
- E. $(10)^*0$

☐ A

☒ C

☒ B

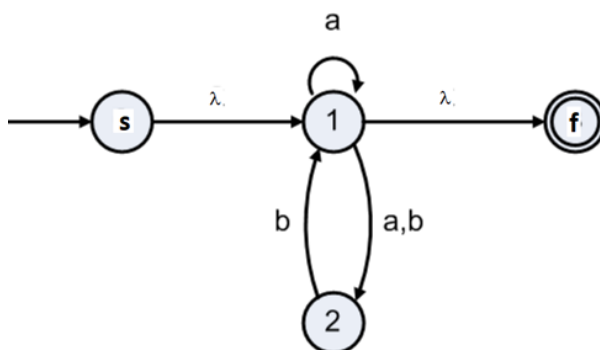
☐ E

☒ D

Incorrect

Question 6

0 / 1 pts



After deleting node 1, which of the new transitions are correctly calculated.

- A. $\text{new}(s,f) = a^*$
- B. $\text{new}(s,f) = \lambda$

C. $\text{new}(s, 2) = a^*(a+b)$

D. $\text{new}(s, 2) = \lambda + a^*(a+b)$

E. $\text{new}(s, 2) = a^*(a+b)b$

F. $\text{new}(2, f) = ba^*(a+b)$

G. $\text{new}(2, f) = ba^*$

☐ A

☒ D

☐ G

☐ E

☐ B

☐ C

☐ F

Quiz Score: **5** out of 6