

Quiz 2

Due Sep 5 at 11:59pm

Points 6

Questions 6

Available Sep 1 at 11:59am - 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	2 out of 6

Score for this quiz: **2** out of 6

Submitted Sep 5 at 7:19pm

This attempt took 18 minutes.

Question 1

0 / 1 pts

Consider the non empty languages L_1 and L_2

Is $L_1 L_2 = L_2 L_1$?

You Answered

☒ True

Correct Answer

☐ False

Question 2

1 / 1 pts

If L is finite then \bar{L} is infinite

Correct!

☒ True☐ False

Question 3

0 / 1 pts

If the alphabet $\Sigma = \{0,1,2\}$, which of the following elements are not in Σ^*

A) 01

B) 000

C) λ D) ϕ

E) 0

You Answered

☒ Both C and D☐ None. All the elements are valid elements

Correct Answer

☐ Only D

☐ Only E☐ Both D and E☐ Only C**Question 4****0 / 1 pts**

Consider the following grammar over $\Sigma = \{a, b, c, d\}$:

$$S \rightarrow Sa \mid dT$$

$$T \rightarrow bTb \mid c$$

How many of the following strings are not in $L(G)$?

Incorrect Answer

☐ bcb

Correct!

☒ dTaa

You Answered

☒ dc

You Answered

☒ dca

Incorrect Answer

☐ cad**Question 5****0 / 1 pts**

For the grammar $G = (V, T, S, P)$ where

$P: S \rightarrow 0A1 \mid \lambda \quad A \rightarrow A0$

and $T = \{0, 1\}$

Which of the following describes $L(G)$ accurately?

- A) λ
- B) $0^m 1^n \mid m, n \geq 0$
- C) $0^m 1^n \mid m, n \geq 1$
- D) $0^m 1^n \mid m > n$

Correct Answer

☐ A

☐ C

☐ D

You Answered

☒ B

Question 6

1 / 1 pts

Consider the grammar $G = (\{S, A, B\}, \{0, 1\}, S, P)$, where $P = \left\{ \begin{array}{l} S \rightarrow AB \\ A \rightarrow 0A1 \mid \lambda \\ B \rightarrow 0B1 \mid \lambda \end{array} \right\}$.

which of the following strings are generated by the grammar.

- I) λ
- II) 01
- III) 10
- IV) 0101
- V) 0011

Correct!

☒ V

Correct!

☒ II

☐ III

Correct!

☒ I

Correct!

☒ IV

Quiz Score: **2** out of 6