

Quiz 14 Results for Daniel Ramirez

❗ Correct answers are hidden.

Score for this quiz: **4.3** out of 6

Submitted Dec 4 at 7:41pm

This attempt took 30 minutes.

Question 1

1 / 1 pts

The pumping lemma is often used to prove that a language is:

- a) Context free
- b) Not context free
- c) Regular
- d) context sensitive

☐ a

☐ c

☐ d

☒ b

Incorrect

Question 2

0 / 1 pts

Let L have grammar G , with start symbol S_1 .

To accept the language L^* , a new grammar can be defined by introducing to G a new start symbol S and the productions

- I) $S \rightarrow S_1 S \mid \lambda$
- II) $S \rightarrow S_1 S$
- III) $S \rightarrow S_1 \mid \lambda$
- IV) None of the above

☐ II☒ III☐ I☐ IV

Partial

Question 3

0.5 / 1 pts

For every CFL L there is an integer m , such that for every string z in L of length $\geq m$, there exists $z = uvxyz$ such that:

Which of the following are true by pumping lemma

I) $|vxy| \leq m$

II) $|vx| > 0$

III) $|vx| > 1$

IV) $uv^2xy^2z \in L$

V) $vwx \in L$

VI) $|vy| > 0$

VII) $uxy \in L$

VIII) $uxz \in L$

☐ IV☒ VI☒ I☐ II☐ VII☐ VIII☐ V☐ III

Question 4

1 / 1 pts

Which of the following accepters can accept $L = \{0^n 1^n 0^n \mid n \text{ is any integer}\}$

☒ LBA☐ NPDA☐ DFA☒ Turing Machine☐ NFA☐ DPDA**Question 5**

1 / 1 pts

If a language is accepted by a Turing Machine, can you say for certain it is accepted by:

- I) DFA
- II) NFA
- III) LBA
- IV) PDA
- V) No. It may not be accepted by NFA or PDA or LBA

☐ I☐ III☒ V

☐ II☐ IV

Partial

Question 6

0.8 / 1 pts

Which accurately describes the comparison in terms of the computational power of an automata

- I) NPDA > DPDA
- II) NFA > DFA
- III) LBA > DFA
- IV) LBA > DPDA
- V) LBA < General Turing Machine
- VI) Turing Machine > LBA > NPDA > NFA

☒ IV☒ I☒ III☐ II☒ VI☐ VQuiz Score: **4.3** out of 6