Quiz 8

Due Mar 19 at 11:59pm **Points** 6 **Questions** 6
Available Mar 16 at 11:59pm - Apr 24 at 11:59pm **Time Limit** 30 Minutes

Instructions

Quiz 8

Attempt History

	Attempt	Time	Score
LATEST	Attempt 1	9 minutes	6 out of 6

Score for this quiz: **6** out of 6
Submitted Mar 19 at 8:20pm
This attempt took 9 minutes.

Question 1 — 1 / 1 pts

If L_1 is regular and L_2 is a finite language (i.e., a language with a finite number of strings), then L_1 union L_2 must be a regular language

Correct!

- (●) True
- ( ) False

Question 2 — 1 / 1 pts

Which of the properties are decidable in case of finite automaton.

(i) Empty **(ii)** Non-empty **(iii)** Finite **(iv) Infinite**
(v) Membership **(vi)** Equality

Correct! ☑ IV

Correct! ☑ V

Correct! ☑ I

Correct! ☑ II

Correct! ☑ VI

Correct! ☑ III

Question 3

1 / 1 pts

If M = (Q, Σ, δ, q0, F) is an automata and q0 $\notin$ F, Then we can conclude that $\lambda \notin$ L(M).

This statement is true for the following:

```
(I) If M is either a DFA or a NFA
(II) If M is a DFA only
(III) If M is a NFA only
(IV) None of the above
```

○ IV

○ III

Correct! ◉ II

○ I

Question 4

1 / 1 pts

Regular expressions that do not contain the star operator can represent only finite languages.

Correct!

- (●) True
- ( ) False

Question 5

1 / 1 pts

If L is a finite language (i.e., a language with a finite number of strings), then L must be a regular language

Correct!

- (●) True
- ( ) False

Question 6

1 / 1 pts

Regular languages can be expressed by regular expressions. We had pointed out that difference operator (-) is not a valid operator in regular expressions. Hence, Regular languages are not closed under the difference operator.

Correct!

- ( ) True
- (●) False

Quiz Score: **6** out of 6