

**Started on** Wednesday, 9 October 2024, 2:30 PM

**State** Finished

**Completed on** Wednesday, 9 October 2024, 2:36 PM

**Time taken** 5 mins 50 secs

**Marks** 0.80/3.00

**Grade** **0.80** out of 3.00 (**26.69%**)

#### Information

## Information

This page contains all the problems for this test. The very last problem asks you to contact the person in charge of the exam and tell him or her the 4-digit key given in the problem text. In return you will be given a 5-digit signing code which you must give as the answer to the problem.

This problem does not count towards the final score, but **tests missing this code will not count towards the final grade**.

The following rules apply:

- Total time allowed: 30 minutes. The test will automatically close if time runs out.
- UiA's usual rules in regards to cheating on exams apply.

#### Question 1

Partially correct

Mark 0.50 out of 1.00

Consider the following regular expression.

$ex = y[A-J]^+$

Which of the following regular expressions accepts at least the same words as  $ex$ ?

☐  $y?[A-J]?$

☒  $y?[A-J]^*$

☐  $y?[A-J]^+$

☐  $y^*[A-J]?$

☐  $y^*[A-J]^*$

☒  $y^*[A-J]^+$

☐  $y+[A-J]?$

☒  $y+[A-J]^*$

☐  $y+[A-J]^+$

☐ None of the above

Question **2**

Partially correct

Mark 0.30 out of 1.00

Which temporal logic statement matches the English sentence "Some darkness leads to a later light."?

$F(\text{darkness} \Rightarrow G \text{ light})$

Question **3**

Incorrect

Mark 0.00 out of 1.00

Let  $R$  be a relation over  $\{0, 1, 2, 3, 4, 5, 6, 7, 8, 9\}$ .

We know that  $R$  is an equivalence relation and a partial order.

Moreover,  $(7, 5)$  is not in  $R$ .

Select all pairs that are in  $R$ .

- ☒  $[1, 4]$
- ☐  $[1, 8]$
- ☒  $[2, 4]$
- ☐  $[5, 5]$
- ☐  $[5, 7]$
- ☐  $[5, 9]$
- ☒  $[6, 1]$
- ☐  $[7, 4]$
- ☐  $[7, 5]$
- ☒  $[7, 7]$
- ☒  $[8, 2]$
- ☐  $[8, 7]$
- ☐ None of the above

Question **4**

Correct

Mark 0.00 out of 0.00

## Signing code

Before closing the test you must answer this problem with a signing code given to you by the person in charge of the test.

Tests missing this signing code will be ignored and will not count towards the final score.

Key: 341

Signing code:

Your last answer was interpreted as follows:

**34872**

[◀ Test 1 \(topics 1-3: Introduction, Concepts, Induction, Recursion, Grammars\)](#)