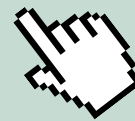# Assignment 1 Automata

Question 1

Correct

Mark 1.00 out of 1.00

⚑ Flag question

Choose the correct regular expression to describe the language {11, 10}

Select one:

- a. 11 ∪ 10
- b. 1110
- c. 11 + 10 ✔
- d. (11 + 10)*

Your answer is correct.

The correct answer is: 11 + 10

Question 2

Correct

Mark 1.00 out of 1.00

⚑ Flag question

Choose the correct regular expression to describe the language: {λ, a, b, ab, abb, abbb, abbbbb …}

Select one:

- a. λ + b + ab* ✔
- b. (ab)*
- c. ab*
- d. a*b*

Your answer is correct.

The correct answer is: λ + b + ab*

Question 3

Correct

Mark 1.00 out of 1.00

⚑ Flag question

S -> aSalbSblalb; The language generated by the above grammar over the alphabet {a,b} is the set of

Select one:

- a. All palindromes
- b. All even length palindromes
- c. All odd length palindromes ✔
- d. Strings that begin and end with the same symbol

Your answer is correct.

The correct answer is: All odd length palindromes

Question 4

Correct

Mark 1.00 out of 1.00

⚑ Flag question

Which of the following CFG's can't be simulated by a DFA?

Select one:

- a. S → aS l a l bS
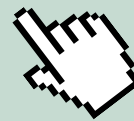- b. S → bS l b
- c. None
- d. S → bbS l bSb l a ✔

Your answer is correct.

The correct answer is: S → bbS l bSb l a

Assignment 1 Automata

Question 5

Correct

Mark 1.00 out of 1.00

⚑ Flag question

The regular expression for { w ∈ {0,1}*: w has two consecutive 0's or three consecutive 1's}is :

Select one:

- ⦿ a. $(0 + 1)^*(00 + 111)(0 + 1)^*$ ✔
- ○ b. $(0 + 1)^*(00 + 111)$
- ○ c. $(00 + 111)(0 + 1)^*$
- ○ d. $(0 + 1)^*(000 + 11)(0 + 1)^*$

Your answer is correct.

The correct answer is: $(0 + 1)^*(00 + 111)(0 + 1)^*$

Question 6

Correct

Mark 1.00 out of 1.00

⚑ Flag question

Choose the correct language described by the regular expression: c + b . a*

Select one:

- ⦿ a. {c, b, ba, baa, baaa, …} ✔
- ○ b. { c, b, ca, ba, caa, baa, …}
- ○ c. { λ, c, b, ba, baa, baaa, …}
- ○ d. {c, b, a, aa, aaa, …}

Your answer is correct.

The correct answer is: {c, b, ba, baa, baaa, …}

Question 7

Correct

Mark 1.00 out of 1.00

⚑ Flag question

The RE in which any number of 0's is followed by any number of 1's followed by any number of 2's is

Select one:

- ○ a. (0+1+2)*
- ⦿ b. 0*1*2* ✔
- ○ c. 0* + 1 + 2

Your answer is correct.

The correct answer is: 0*1*2*

Question 8

Correct

Mark 1.00 out of 1.00

⚑ Flag question

Find a regular expression describes the language accepted by the following automaton

Select one:

- ⦿ a. a*ba* ✔
- ○ b. a*b(aa)*
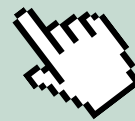- ○ c. a*b + a*ba(aa)*
- ○ d. a*b + a*b(aa)*

Your answer is correct.

The correct answer is: a*ba*

Assignment 1
Automata

Question 9

Correct

Mark 1.00 out of 1.00

⚑ Flag question

Find a DFA accepts the language accepted by the following NFA

Select one:

○ a.

◉ b. ✔

○ c.

○ d.

Your answer is correct.

The correct answer is:

Question 10

Correct

Mark 1.00 out of 1.00

⚑ Flag question

Find a regular expression to describe the language $\{a, ab, ba, abb, baa, \ldots, ab^n, ba^n, \ldots\}$

Select one:

○ a. ab^*a^*

○ b. $ab^* + ba^*$

◉ c. $ab^* + baa^*$ ✔

○ d. $a(b^* + ba^*)$

Your answer is correct.

The correct answer is: $ab^* + baa^*$