Question 1
Complete
Marked out of 1.00
⚑ Flag question

If every element of set A is also an element of set B, but B also has some element not contained in A, we say that A is a 'proper subset' of B.

Select one:
○ True
◉ False

Question 2
Complete
Marked out of 1.00
⚑ Flag question

if A = {x ∈ R | x is square of an integer}.
Is 5 an element of A?

Select one:
○ True
◉ False

Question 3
Complete
Marked out of 1.00
⚑ Flag question

Determine whether the following statement is True or False.
$x \in \{x\}$

Select one:
◉ True
○ False

Question 4
Complete
Marked out of 1.00
⚑ Flag question

A set with no element at all is called the empty set.

Select one:
◉ True
○ False

Question 5
Complete
Marked out of 1.00
⚑ Flag question

If a set has 'n' elements, how many elements does the powerset have?

Answer: 2^n

Question 6
Complete
Marked out of 1.00
⚑ Flag question

If every element of set A is also an element of set B, then A is a 'subset' of B.

Select one:
◉ True
○ False

Question 7
Complete
Marked out of 1.00
⚑ Flag question

A set is a collection of objects.

Select one:
◉ True
○ False

Question 8
Complete
Marked out of 1.00
⚑ Flag question

True or False {1, 3, 3, 5, 5, 5} = {5, 3, 1} ?

Note:
Type T or F

Answer: T

Question 9
Complete
Marked out of 1.00
⚑ Flag question

Determine whether the following statement is True or False.
$\emptyset \in \{x\}$

Select one:
○ True
◉ False

Question 10
Complete
Marked out of 1.00
⚑ Flag question

if A = {x ∈ R | x is an integer greather than 1}.
Is 5 an element of A?

Select one:
◉ True
○ False

Question 11
Complete
Marked out of 1.00
⚑ Flag question

Given
$$L = \{a^n b^n : n \geq 0\}$$

Reverse of L is given by

Select one:
○ a. $L^R = \{b^n a^n : n \geq 0\}$
◉ b. $L^R = \{a^R b^R : R \geq 0\}$
○ c. $L^R = \{b^R a^R : R \geq 0\}$
○ d. $L^R = \{b^n a^n : n \geq R\}$

Question 12
Complete
Marked out of 1.00
⚑ Flag question

Given L1 is English language and L2 is French language.
L1 ∩ L2 = Language that contains all the sentences that are in both L1 and L2.

Select one:
○ True
◉ False

Question 13
Complete
Marked out of 1.00
⚑ Flag question

If w = vy, then suffix of w is ?

Answer: y

Question 14
Complete
Marked out of 1.00
⚑ Flag question

Given
$$A = a, b, c$$
$$L1 = \{a, aa, ab, ac, abc, cab\}$$
$$L2 = \{aba, aabaa\}$$
$$L3 = \{\}$$
$$L4 = \{a^i cb^i \geq 1\}$$

Is $L4$ a laguage over the alphabet A?

Select one:
○ a. False
◉ b. True

Given

$$L = \{a^n b^n : n \geq 0\}$$

Obtain L^2

Select one:

○ a. $L = \{a^n b^n : n \geq 2\}$

○ b. $L = \{a^n b^n a^m b^m : n \geq 2, m \geq 2\}$

◉ c. $L = \{a^n b^n a^m b^m : n \geq 0, m \geq 0\}$

○ d. $L = \{a^n b^n : n \geq 0\}$

Let

$$L = ab, aa, baa$$

Which of the following string is in L^*?

Select one:

○ a. baaaaabaaaab

◉ b. aaaabaaaa

A string over an alphabet is a finite sequence of symbols from that alphabet, which is usually written next to one another and not separated by commas.

Select one:

◉ True

○ False

Given L1 is English language and L2 is French language.
L1 ∪ L2 = Set of all sentences someone who speaks both English and French can recognize.

Select one:

◉ True

○ False

Given

$$A = a, b, c$$

$$L1 = \{a, aa, ab, ac, abc, cab\}$$

$$L2 = \{aba, aabaa\}$$

$$L3 = \{\}$$

$$L4 = \{a^i c b^i \geq 1\}$$

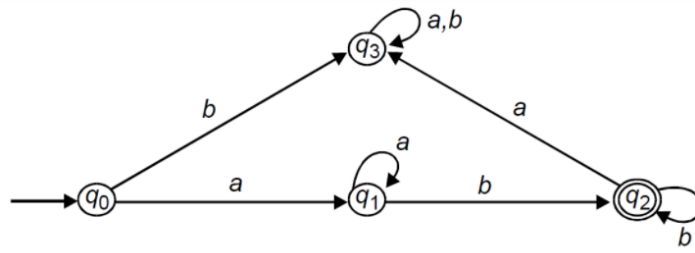Is $L2$ a laguage over the alphabet A?

Select one:

○ a. False

◉ b. True

Given $u = a^2 b a^3 b^2$ and $v = bab^2$ Obtain uv

Select one:

◉ a. $uv = a^2 b a^3 b^3 a b^2$

○ b. $uv = a^2 b a^3 b^2 a b^2$

Question 21

Complete

Marked out of
1.00

⚑ Flag
question

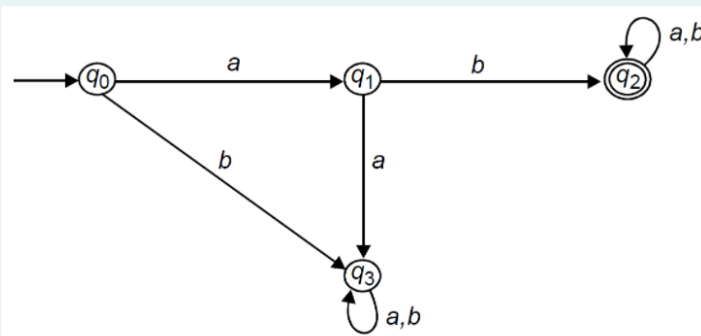Given $S = \{a, b\}$ and the constructed DFA is:

what is the language that can be accepted with the DFA?

Select one:

- ⦿ a. $L = \{a^m b^n : m, n > 0\}$
- ○ b. $L = \{b^n a^m : m, n > 0\}$
- ○ c. $L = \{b^m a^n : m, n > 1\}$
- ○ d. $L = \{b^n a^m : m, n > 1\}$

Question 22

Complete

Marked out of
1.00

⚑ Flag
question

Jika diberikan S = {a, b} dan mesin DFA sebagai berikut:
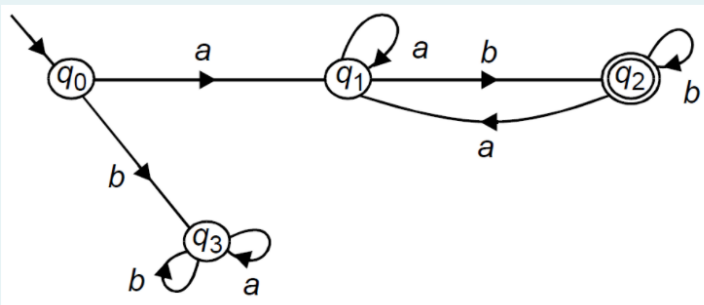

Tentukan bahasa yang dapat diterima mesin di atas!

Select one:

- ○ a. $L = \{w : w \in \Sigma^* - ending - with - the - suffix -' ab'\}$
- ○ b. $L = \{w : w \in \Sigma^* - ending - with - the - suffix -' ba'\}$
- ○ c. $L = \{w : w \in \Sigma^* - starting - with - the - prefix -' ba'\}$
- ⦿ d. $L = \{w : w \in \Sigma^* - starting - with - the - prefix -' ab'\}$

Question 23

Complete

Marked out of
1.00

⚑ Flag
question

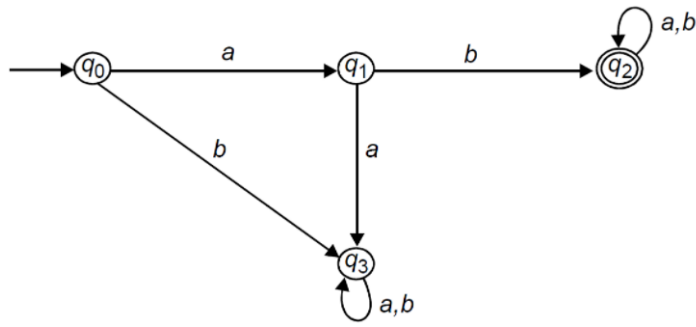Given S = {a, b} and the constructed DFA is:
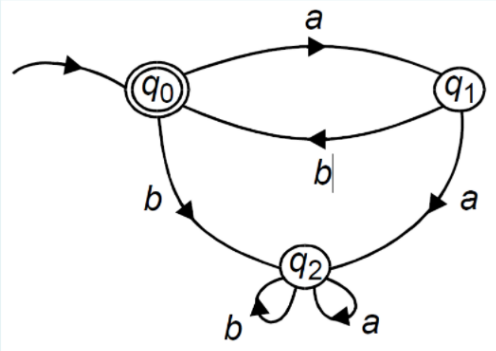

what is the language that can be accepted with the DFA?

Select one:

- ○ a. $L = \{b^n : n \geq 0\}$
- ○ b. $L = \{a(a, b)^* b\}$
- ⦿ c. $L = \{a^n b^m : n > 0, m \geq 0\}$
- ○ d. $L = \{a^n : n \geq 1\}$

Given S = {a, b} and the constructed DFA is:

what is the language that can be accepted with the DFA?

Select one:

- a. $L = \{w : w \in \Sigma^* - ending - with - the - suffix -' ba'\}$
- b. $L = \{w : w \in \Sigma^* - starting - with - the - prefix -' ba'\}$
- c. $L = \{w : w \in \Sigma^* - starting - with - the - prefix -' ab'\}$
- d. $L = \{w : w \in \Sigma^* - ending - with - the - suffix -' ab'\}$

Given S = {a, b} and the constructed DFA is:

what is the language that can be accepted with the DFA?

Select one:

- a. $L = \{(ab)^n : n \geq 1\}$
- b. $L = \{(ab)^n : n \geq 0\}$
- c. $L = \{(aba)^n : n \geq 0\}$
- d. $L = \{(aba)^n : n \geq 1\}$