

Learning4help by Waqas

Asslam-o-Alaikum! In this file we'll provide you **CS402 quiz 3 2023 Important Finalterm MCQs. Must Prepare Before Finalterm Exams.** Verify Answers yourself too. If you found mistake then inform me.

If you found mistake then let us know.

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Question # 8 of 15 (Start time: 11:58:18 AM, 31 January 2023) Total Marks: 1

To examine whether a certain FA accepts any words, it is required to seek the paths _____ state.

Select the correct option

- ☐ from final to back final
- ☐ from final to initial
- ☐ from initial to initial back
- ☒ from initial to final

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Question # 7 of 15 (Start time: 11:57:17 AM, 31 January 2023) Total Marks: 1

A non regular language can be represented by

Select the correct option

- ☐ TG
- ☐ FA
- ☐ RE
- ☒ None of the given options

If an FA accepts a word then there must exist a path from _____.

Select the correct option

- ☐ Initial to final state by traversing each state
- ☐ Initial to each state but not to final state
- ☒ Initial to final state
- ☐ Initial to each state

The complement of a regular language is also _____.

Select the correct option

- ☐ irregular
- ☐ irregular but infinite
- ☐ irregular but finite
- ☒ regular

Click to Save Answer & Move to Next Question

Set of all palindromes over $\{a,b\}$ is:

Select the correct option

- ☐ Regular
- ☐ Regular and infinite
- ☐ Regular and finite
- ☒ Non-regular

Question # 3 of 15 (Start time: 11:51:47 AM, 31 January 2023) Total Marks: 1

Which of the following is used to delay the transmission of signal along the wire by one step (clock pulse)?

Select the correct option

- ☒ Delay box
- ☐ Holdup box
- ☐ Reduce box
- ☐ Slow box

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CS402 - Theory of Automata (Quiz# 03 & Quiz# 04) Quiz Start Time: 11:50 AM, 31 January 2023

Question # 3 of 15 (Start time: 11:51:47 AM, 31 January 2023) Total Marks: 1

Which of the following is used to delay the transmission of signal along the wire by one step (clock pulse)?

Select the correct option

☒	Delay box
☐	Holdup box
☐	Reduce box

The language "PRIME" is an example of _____ language.

Select the correct option

☐	regular but finite
☒	non regular
☐	regular
☐	non regular but finite

Which of the following is a non-regular language?

Select the correct option

- ☐ Even-Even
- ☐ Odd-Odd
- ☐ Language of strings ending in abba
- ☒ Prime

In $\text{pref}(Q \text{ in } R)$, Q is _____ to/than R .

Select the correct option

- ☐ Smaller
- ☐ Equal
- ☐ Greater
- ☒ Not equal

Click to Save Answer & Move to Next Question

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Question 14 of 15 (Start time: 12:02:17 PM, 07 January 2020)

If a language is regular it must generate _____ number of distinct classes.

Select the correct option

- ☐ two
- ☐ three
- ☐ infinite
- ☒ finite

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Question 14 of 15 (Start time: 12:02:17 PM, 07 January 2020)

If a language is regular it must generate _____ number of distinct classes.

Select the correct option

- ☐ two
- ☐ three
- ☐ infinite
- ☒ finite

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Question # 13 of 15 (Start time: 12:01:52 PM, 31 January 2023) Total Marks: 1

A language that can be expressed by RE, is said to be a _____ language.

Select the correct option

- ☐ infinite
- ☐ irregular
- ☒ regular
- ☐ finite

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Question # 12 of 15 (Start time: 12:01:07 PM, 31 January 2023) Total Marks: 1

If a language generates finite number of distinct classes then it must be _____

Select the correct option

- ☐ context free
- ☒ regular
- ☐ both regular and context free
- ☐ non-regular

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Question # 11 of 15 (Start time: 11:59:52 AM, 31 January 2023) Total Marks: 1

In pumping lemma theorem $(x y^n z)$ the range of n is

Select the correct option

- ☐ $n=0, 1, 2, 3, 4$
- ☒ $n=1, 2, 3, 4, \dots$
- ☐ $n=-\dots, -3, -2, -1, 1, 2, 3, 4, \dots$
- ☐ $n=-\dots, -3, -2, -1, 0, 1, 2, 3, 4, \dots$

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Question # 10 of 15 (Start time: 11:59:25 AM, 31 January 2023) Total Marks: 1

A problem that has decision procedure is called _____ problem.

Select the correct option

- ☐ un-decidable
- ☒ decidable
- ☐ Infinite
- ☐ Regular language

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Question # 9 of 15 (Start time: 11:58:52 AM, 31 January 2023) Total Marks: 1

What will be the 9's complement of the number 872?

Select the correct option

☐	172
☐	721
☐	271
☒	127

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Question # 15 of 15 (Start time: 07:46:01 PM, 03 February 2023) Total Marks: 1

A problem that has decision procedure is called _____ problem.

Select the correct option

- ☒ decidable
- ☐ Regular language
- ☐ un-decidable
- ☐ Infinite

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Question # 14 of 15 (Start time: 07:45:31 PM, 03 February 2023) Total Marks: 1

A language that can be expressed by RE, is said to be a _____ language.

Select the correct option

- ☐ infinite
- ☒ regular
- ☐ finite
- ☐ irregular

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Question # 13 of 15 (Start time: 07:44:57 PM, 03 February 2023) Total Marks: 1

If L1 and L2 are two regular languages, then they _____ expressed by FAs.

Select the correct option

- ☐ May be
- ☒ can be
- ☐ cannot be
- ☐ may or may not be

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Question # 12 of 15 (Start time: 07:44:33 PM, 03 February 2023) Total Marks: 1

The strings or words which do not belong to a language are called _____ of that language.

Select the correct option

- ☐ Intersection
- ☒ Complement
- ☐ Quotient
- ☐ Union

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Question # 3 of 10 (Start time: 08:48:25 AM, 04 July 2023) Total Marks: 1

If L_1 and L_2 are regular languages then which statement is NOT true?

Select the correct option

- ☐ $L_1 + L_2$ is always regular
- ☐ $L_1 L_2$ is always regular
- ☐ L_1^* is always regular
- ☒ L_1/L_2 is always regular

Question # 10 of 10 (Start time: 03:58:43 PM, 04 July 2023) Total Marks: 1

Strings xyz belongs to Σ^* such that $xz \in L$ but $yz \notin L$ where $L \subseteq \Sigma^*$ are:

Select the correct option

- ☐ Both distinguishable and indistinguishable
- ☒ Distinguishable
- ☐ Undetermined
- ☐ Indistinguishable

Question # 10 of 10 (Start time: 03:58:43 PM, 04 July 2023) Total Marks: 1

Strings xy, z belongs to Σ^* such that $xz \in L$ but $yz \notin L$ where $L \subseteq \Sigma^*$ are:

Select the correct option

- ☐ Both distinguishable and indistinguishable
- ☒ Distinguishable
- ☐ Undetermined
- ☐ Indistinguishable

Question # 9 of 10 (Start time: 03:57:32 PM, 04 July 2023) Total Marks: 1

A language that can be expressed by RE, is said to be a _____ language.

Select the correct option

- ☒ regular
- ☐ irregular
- ☐ finite
- ☐ infinite

Question # 8 of 10 (Start time: 03:56:21 PM, 04 July 2023) Total Marks: 1

In which of the following machine, the length of output string is the same to that of input string?

Select the correct option

- ☒ Mealy machine
- ☐ Moore machine
- ☐ Finite automaton with output
- ☐ Non-deterministic finite automaton

Question # 8 of 10 (Start time: 03:56:21 PM, 04 July 2023) Total Marks: 1

In which of the following machine, the length of output string is the same to that of input string?

Select the correct option

- ☒ Mealy machine
- ☐ Moore machine
- ☐ Finite automaton with output

Question # 6 of 10 (Start time: 03:53:17 PM, 04 July 2023) Total Marks: 1

If we have input 110010111 and the machine generates the 001101000 as an output, then that machine will be called?

Select the correct option

- ☐ Moore machine
- ☒ Complementing machine
- ☐ Incrementing machine
- ☐ Mealy machine

Question # 5 of 10 (Start time: 03:52:01 PM, 04 July 2023) Total Marks: 1

In Moore machine, if the length of input string is 9, then the length of output string will be:

Select the correct option

- ☐ 9
- ☐ 8
- ☐ 7
- ☒ 10

CS402 - Theory of Automata (Quiz# 03) Quiz Start Time: 03:46 PM, 04 July 2023

Question # 1 of 10 (Start time: 03:46:49 PM, 04 July 2023) Total Marks: 1

If we subtract a binary number 1010 from the binary number 1101(ignore the overflow), then the result will be:

Select the correct option

- ☐ 1100
- ☐ 0010
- ☐ 0011

In Moore machine, if the length of input string is 9, then the length of output string will be:

Select the correct option

- ☐ 9
- ☐ 8
- ☐ 7
- ☒ 10

Moore machine can have ----- final states.

Select the correct option

- ☐ More than one but finite
- ☐ More than one but infinite
- ☐ One
- ☒ Zero

Question # 10 of 10 (Start time: 09:00:01 AM, 04 July 2023) Total Marks: 1

If L1 and L2 are two regular languages, then L1 Intersection L2 is:

Select the correct option

- ☒ Regular
- ☐ Infinite
- ☐ Finite

Question # 9 of 10 (Start time: 08:57:33 AM, 04 July 2023) Total Marks: 1

If we subtract a binary number 1010 from the binary number 1101(ignore the overflow), then the result will be:

Select the correct option

☐	1010
☐	0010
☒	0011
☐	1100

----- state is not important in Moore machine.

Select the correct option

☐	Empty
☐	Final
☐	Combination of
☒	Initial

Question # 3 of 10 (Start time: 03:49:41 PM, 04 July 2023) Total Marks: 1

If L_1 and L_2 are two regular languages, then $L_1 \cap L_2$ is:

Select the correct option

- ☐ Finite
- ☐ Infinite
- ☒ Regular
- ☐ Irregular

Question # 7 of 10 (Start time: 08:54:06 AM, 04 July 2023) Total Marks: 1

A loop at a state is supposed to be ----- transition while converting Moore machine into an equivalent Melay machine.

Select the correct option

- ☐ Outgoing
- ☒ Incoming
- ☐ Complex

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Question # 6 of 10 (Start time: 08:52:28 AM, 04 July 2023) **Total Marks: 1**

Moore Machine is an application of:

Select the correct option

- ☐ Finite automata without input
- ☐ Non- Finite automata with output
- ☒ Finite automata with output
- ☐ None of the mentioned

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Question # 5 of 10 (Start time: 08:50:45 AM, 04 July 2023) **Total Marks: 1**

Let L be the language of all strings, defined over $\Sigma = \{0,1\}$, ending in 111. Which of the following strings are distinguishable with respect to L with z being 11?

Select the correct option

- ☒ 111, 101
- ☐ 111, 111
- ☐ 010, 101
- ☐ 001, 101

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Question # 3 of 10 (Start time: 08:48:57 AM, 04 July 2023)

In Mealy machine the output depends on _____

Select the correct option

- ☒ Present state and Present input
- ☐ Only present state
- ☐ Nothing
- ☐ Type of input

CS402 - Theory of Automata (Quiz# 03) Quiz Start Time: 08:44 AM, 04 July 2023

Question # 4 of 10 (Start time: 08:49:07 AM, 04 July 2023) Total Marks: 1

In Moore machine, output is produced over the change of:

Select the correct option

- ☐ None of the mentioned
- ☒ States
- ☐ Transitions and states
- ☐ Transitions

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Question # 11 of 15 (Start time: 07:43:12 PM, 03 February 2023) Total Marks: 1

For a non-regular language, there exists _____ FA.

Select the correct option

- ☐ one
- ☐ at most one
- ☒ no
- ☐ at least one

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