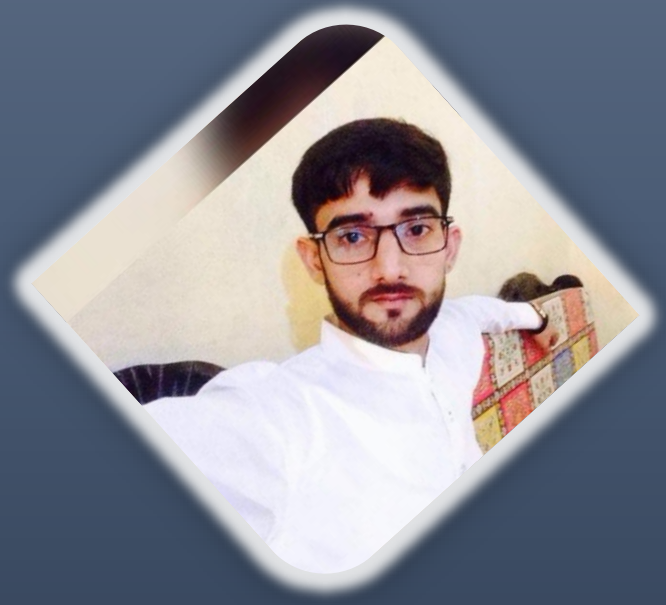
RIZ MUGHAL

QUIZ MASTER

Grand Quiz(CS402)

100% correct solution.

For more information you can visit my channel and for any type of help related to CS619 you can contact me.



YOUTUBE CHANNEL:

https://www.youtube.com/channel/UCINsFwDiB62SValCcPDZbRQ/playlists

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CS402:Grand Quiz

Quiz Start Time: 01:08 AM, 30 Decemb

Question # 1 of 30 (Start time: 01:08:19 AM, 30 December 2020)

Total

Which of the following steps replaces multiple incoming transition edges with a single one in proving Kleene's theorem part II?

Select the correct option

- 1
- 2
- 3
- 4

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Question # 2 of 30 (Start time: 01:08:40 AM, 30 December 2020)

Let FA1 accepts many strings and FA2 accepts no string, then FA1+FA2 will be equal to:

Select the correct option

- [x] FA1
- [ ] FA2
- [ ] FA2-FA1
- [ ] (FA2)*

Click to Sav

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Quiz Start Time: 01:08 AM, 30 December 2020

Question # 3 of 30 (Start time: 01:08:52 AM, 30 December 2020)

Total Marks: 1

Let L be the language of all strings, defined over Σ = {0,1}, ending in 10. Which of the following strings are indistinguishable with respect to L with z being 0?

Select the correct option

- 100, 101
- 111, 101 ✓
- 110, 101
- 010, 101

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Question # 4 of 30 (Start time: 01:09:13 AM, 30 December 2020)

If r1 = (aa + bb) and r2 = (a + b) then the language (aa + bb)(a + b) will be generated by _____

Select the correct option

- [x] (r1)(r2)
- [ ] (r1 + r2)
- [ ] (r2)(r1)
- [ ] (r1)*

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Question # 5 of 30 (Start time: 01:09:25 AM, 30 December 2020) **Total**

Introducing new start state in case of multiple start states is the step no. _____ of proving Kleene's theorem part II.

Select the correct option

- (●) 1 ✓
- ( ) 2
- ( ) 3
- ( ) 4

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Question # 6 of 30 (Start time: 01:09:37 AM, 30 December 2020)

The language having even number of a's and even number of b's defined over S = {a, b} is called ___

Select the correct option

- [x] EVEN-EVEN ✓
- [ ] ODD-ODD
- [ ] PALINDROME
- [ ] FACTORIAL

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Question # 7 of 30 (Start time: 01:10:13 AM, 30 December 2020)

In NFA having no transition at certain state, FA can be built by introducing:

Select the correct option

- (●) Empty state ✓
- ( ) Combination of states
- ( ) Initial state
- ( ) Final state

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Question # 8 of 30 (Start time: 01:10:27 AM, 30 December 2020)

For every three regular expressions R, S, and T, the languages denoted by R(S U T) and (RS) U (RT) are the _____ .

Select the correct option

- [x] Same
- [ ] Different
- [ ] R(S U T) is Greater
- [ ] None of the given options

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Question # 9 of 30 (Start time: 01:11:19 AM, 30 December 2020)

Which of the following string belongs to the language of the regular expression (aa*b)*?

Select the correct option

- baabab
- abbbaa
- aaaaaa
- aabaab ✓

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Question # 10 of 30 (Start time: 01:11:34 AM, 30 December 2020)

If L1′ and L2′ are regular languages, then L1.L2 will be

Select the correct option

- (●) regular ✓
- ( ) non regular
- ( ) may be regular
- ( ) none of the mentioned

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Quiz Start Time: 01:08 AM, 30 December 2020

Question # 11 of 30 (Start time: 01:11:45 AM, 30 December 2020) **Total Marks:** 1

Suppose a language L1 has 2 states and L2 has 2 states. If we have a machine M that accepts L1 ∩ L2. Then, the total number of states in M is equal to _____.

Select the correct option

- ○ 2
- ◉ 4 ✓
- ○ 6
- ○ 8

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Question # 12 of 30 (Start time: 01:12:00 AM, 30 December 2020)

If L1 and L2′ are regular languages, L1 ∩ (L2′ U L1′)′ will be

Select the correct option

- [x] regular ✓
- [ ] non regular
- [ ] may be regular
- [ ] none of the mentioned

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Question # 13 of 30 (Start time: 01:12:11 AM, 30 December 2020)

In Mealy machine the output depends on _____

Select the correct option

- ○ Only present state
- ◉ Present state and Present input ✓
- ○ Nothing
- ○ Type of input

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Question # 14 of 30 (Start time: 01:12:23 AM, 30 December 2020)

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

Select the correct option

- (●) Distinguishable ✓
- ( ) Indistinguishable
- ( ) Both distinguishable and indistinguishable
- ( ) Undetermined

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Question # 15 of 30 (Start time: 01:12:35 AM, 30 December 2020)

Melay machine to increase the output string in magnitude by 1 is called:

Select the correct option

- Complementing machine
- Incrementing machine ✓
- Decrementing machine
- Converting machine

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Quiz Start Time: 01:0

Question # 16 of 30 (Start time: 01:12:48 AM, 30 December 2020)

Suppose we have FA3 (which is equal to FA1 + FA2), then the final state of FA3 will be declared final if:

Select the correct option

- ○ It corresponds to final states of both FA1 and FA2
- ○ It corresponds to final states of FA1 only
- ○ It corresponds to final states of FA2 only
- ◉ It corresponds to any of the final states in FA1 or FA2 ✓

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Question # 17 of 30 (Start time: 01:13:06 AM, 30 December 2020) **Total**

If we have a finite language and the number of states in the FA is n then the maximum number of letters in the each word of the language that will be accepted by the given FA will be:

Select the correct option

- 1
- n-1
- n+1
- n

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Question # 18 of 30 (Start time: 01:13:20 AM, 30 December 2020)

Which of the following state is introduced while developing NFA for the closure of an FA?

Select the correct option

- ○ Simply an initial state
- ○ Final state
- ◉ An initial state which should be final as well ✓
- ○ An initial state with loop for all letters

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Question # 19 of 30 (Start time: 01:13:33 AM, 30 December

Length of EVEN-EVEN language is _____.

Select the correct option

- (●) Even ✓
- ( ) Odd
- ( ) Sometimes even & sometimes odd
- ( ) Such language doesn't exist

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Question # 20 of 30 (Start time: 01:13:49 AM, 30 December 2020)

If FA1 corresponds to (a+b)* then FA1 must accept _____ string/strings.

Select the correct option

- ○ No
- ○ Odd length
- ○ Even length
- ◉ Every ✓

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Question # 21 of 30 (Start time: 01:14:02 AM, 30 Decembe

In FA, initial state can be represented by:

Select the correct option

- (●) drawing an arrow head before that state
- ( ) drawing a circle in that state
- ( ) drawing '+' sign in th state
- ( ) leave the state empty

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Quiz Start Time: 01:08 AM, 30 December 2020

Question # 22 of 30 (Start time: 01:14:15 AM, 30 December 2020) **Total Marks:** 1

Which one of the following machine is represented as a pictorial representation with states and directed edges labeled by an input letter along with an output character?

Select the correct option

- ○ Moore machine
- ◉ Mealy machine ✓
- ○ Finite state machine
- ○ Deterministic finite state machine

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Question # 23 of 30 (Start time: 01:14:32 AM, 30 December 2020)

The length of string "AbBAbcd" defined over Σ ={Ab,B,c,d} is _____.

Select the correct option

- three
- four
- five ✓
- six

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Question # 24 of 30 (Start time: 01:14:44 AM, 30 December 2020)

An FA is a collection of:

Select the correct option

- (●) Finite states, finite transitions and finite input letters
- ( ) Infinite states, infinite transitions and infinite input letters
- ( ) Only finite states and finite transitions
- ( ) Only infinite states and infinite transitions

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Question # 25 of 30 (Start time: 01:14:58 AM, 30 December 2020)

Given the language L = {ab, aa, baa}, which of the following strings are in L*?
1) abaabaaabaa
2) aaaabaaaa
3) baaaaabaaaab
4) baaaaabaa

Select the correct option

○	1, 2 and 3
○	2, 3 and 4
◉	1, 2 and 4
○	1, 3 and 4

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Question # 26 of 30 (Start time: 01:15:10 AM, 30 December 2020)

Total Marks:

In the context of make NFA for the concatenation of FA1 and FA2 (FA1 accepting null string), which of the following option is correct?

Select the correct option

- ○ Initial states in both FAs
- ○ FA2 having initial state only
- ○ FA2 having final state only
- ◉ Final states in both FAs ✓

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Question # 27 of 30 (Start time: 01:15:26 AM, 30 December 2020)

Every _____ is a _____ as well, but the converse may not be true.

Select the correct option

- TG, FA
- FA, TG ✓
- TG, GTG
- FA,GTG

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Question # 28 of 30 (Start time: 01:15:39 AM, 30 December 2020

NFA with null string has ---------- initial state(s).

Select the correct option

- (●) One ✓
- ( ) Two
- ( ) Three
- ( ) Many

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Question # 29 of 30 (Start time: 01:15:53 AM, 30 December 2020)

While finding RE corresponding to a TG, we connect the new start state with the old start state by _____ transition.

Select the correct option

- a
- b
- null ✓
- RE

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Question # 30 of 30 (Start time: 01:16:11 AM, 30 December 2020

If S = { x }, then S* will be _____.

Select the correct option

- {^,x,xxx,xxxx,xxxxx,...}
- {^,x,xx,xxx,xxxx,...} ✓
- {^,x,xxx,xxxxx,xxxx...}
- {^,xx,xxxx,xxxxxx,xxxxxxxx,...}