Cs402 Quiz
Solved by Rizwan Qadeer (Riz Mughal)
Youtube link: https://www.youtube.com/channel/UCINsFwDiB62SValCcPDZbRQ/playlists

Question # 1 of 10 (Start time: 01:23:44 PM, 12 August 2020)

If an effectively solvable problem has answer in YES or NO, then the solution is called ________.

Select the correct option:
- infinite problem
- decision procedure
- finite solution
- optimal procedure
If the intersection of two regular languages is regular then the complement of the intersection of these two languages is ________.
If R is regular language and Q is any language (regular/ non-regular), then Pref(____in______) is regular.

Select the correct option

- Q,Q
- Q,R
- R,Q
- R,R
Question # 4 of 10 (Start time: 01:24:36 PM, 12 August 2020)

If new $A = 1$ NAND ($1$ AND $1$), then what will be the value of new $A$?

Select the correct option

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The values of input (say a & b) do not remain same in one cycle due to

Select the correct option

- NAND gate
- Clock pulse
- OR gate
- NOT gate
The CFG $S \rightarrow aSb|ab|$ is used to express the language _______.

Select the correct option

- Prime
- Palindrome
- Equal
- Even
Question # 7 of 10 ( Start time: 01:25:34 PM, 12 August 2020 )
If \( Q = \{xx, xyxxy\} \) and \( R = \{xyxxyxxy, xxyyyxx\} \) then \( \text{Pref}( Q \text{ in } R) = \) 

Select the correct option

- [ ] xyyxy
- [x] xxy
- [ ] xyxxy
- [ ] xx
Incise of Myhill-Nerode theorem, if a language $L$ partitions sigma star into distinct classes and $L$ is also regular then $L$ generates _______ number of classes.

Select the correct option

- infinite
- specified
- finite
- odd

Correct answer: finite
Question # 9 of 10 ( Start time: 01:26.07 PM, 12 August 2020 )

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

Select the correct option

- Intersection
- Union
- Complement
- Quotient

(Selected answer: Complement)
Which of the following is not a true theorem?

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<th>Select the correct option</th>
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<td>Decidability theorem</td>
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<td>Equivalency theorem</td>
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<td>Myhill Nerode theorem</td>
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<td>Pseudo theorem</td>
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We have FA accepting the language L, now if we are going to find the complement of L, then we should:

Select the correct option

- Change FA non final states into final states
- Change FA final states into non final states
- Only change FA old final states into non final states
- Change FA non final states into final and final states into non final states
If an effectively solvable problem has an answer in YES or NO, then the solution is called ________.

Select the correct option:

- infinite problem
- decision procedure
- finite solution
- optimal procedure
Question # 3 of 10 (Start time: 01:32:36 PM, 12 August 2020)

Even-Even language partitions $\Sigma^*$ into _________ distinct classes.

Select the correct option

- [ ] two
- [ ] three
- [x] four
- [ ] five
Question # 4 of 10  (Start time: 01:32:53 PM, 12 August 2020)

If new A = 1 NAND (1 AND 1), then what will be the value of new A?

Select the correct option

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Prime is a ______________ language.

Select the correct option

- finite
- both context free and regular
- regular
- non-regular
Finite Automaton (FA) must have ________ number of states while a language has ________ words.

Select the correct option

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

Select the correct option

- Intersection
- Union
- Complement
- Quotient
What will be the 9’s complement of the number 872?

Select the correct option

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Question # 9 of 10 (Start time: 01:34:22 PM, 12 August 2020)

The language “PRIME” is an example of _______ language.

Select the correct option

- regular but finite
- regular
- non regular but finite
- non regular

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If L1 and L2 are regular languages then which statement is NOT true?

Select the correct option

- L1 + L2 is always regular
- L1 L2 is always regular
- L1/L2 is always regular
- L1* is always regular
If a language is regular it must generate __________ number of distinct classes.

Select the correct option

- finite
- infinite
- two
- three
If new A = 1 NAND (1 AND 1), then what will be the value of new A?

Select the correct option:

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Question # 3 of 10 ( Start time: 01:40:04 PM, 12 August 2020 )

The operators like (*, +) in the parse tree are considered as _______.

Select the correct option

- terminals
- non-terminals
- productions
- intermediates
Question # 4 of 10 (Start time: 01:40:19 PM. 12 August 2020)

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

Select the correct option

- Regular
- Regular and finite
- Regular and infinite
- Non-regular

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If an effectively solvable problem has answer in YES or NO, then the solution is called ________.

Select the correct option

- infinite problem
- decision procedure  **(Correct)**
- finite solution
- optimal procedure
Which one of the following languages is a non regular language?

Select the correct option

- Even-even
- Containing double a
- Start and end with same letter
- Palindrome

(RIZ MUGHAL)
Question # 7 of 10 ( Start time: 01:41:09 PM, 12 August 2020 )
The language of all strings partition $\Sigma^*$ into __________ class(es).

Select the correct option

- one
- two
- three
- four
The language of all strings not beginning with 'b' partitions $\sum^*$ into ________ distinct classes.

Select the correct option

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The values of input (say a & b) do not remain same in one cycle due to

Select the correct option

- NAND gate
- Clock pulse
- OR gate
- NOT gate
In a CFG, the non-terminals are denoted by ________.

Select the correct option

- Small letters
- Numbers
- Capital letters
- Small letters and numbers