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CS402 GRAND QUIZ

Sr.No	MCQS	ANSWER
1.	Which of the following steps replaces multiple incoming transition edges with a single one proving Kleene's theorem part II?	Step 3
2.	Let FA1 accepts many strings and FA2 accepts no strings, then FA1+FA2 will be equal to:	FA1
3.	Let L be the language of all strings, defined over ∑ =(0,1), ending in 10. Which of the following strings are indistinguishable w.r.t L with z being 0?	(010,101)
4.	If r1=(aa+bb)and r2=(a+b) then the language (aa+bb)(a+b) will bhe generated by_____	(r)(r2)
5.	Introducing a new start state in the case of multiple states is step no._____of proving Kleen's theorem part II.	1
6.	The language having even numbers of a's and even number of b's defined over S={a,b} is called _____	EVEN-EVEN
7.	In NFA having no transition at a certain state, FA can be built by introducing :	Empty state
8.	For every three regular expression R, S, and T. the language denoted by R(S U T) and (RS)U(RT) are the _____	Same
9.	Which of the following string belongs to the language of the regular expression (aa*b)?	aabaab
10.	If L1' and L2' are regular languages, then L1, L2 will be	Regular
11.	Suppose the language L1 has 2 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_____	4

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12.	If L is a regular language, then (L')' U L will be:	L
13.	In Mealy machine, the output depends on_____	Present state and Present output
14.	Strings x,y,z belongs to $\sum^*$ such that $xz \in L$ but $yz \notin L$ where $L \subseteq \sum^*$ are:	Distinguishable
15.	Melay machine to increase the output string in magnitude by 1 is called:	Incrementing machine
16.	Suppose we have FA3 (which is to FA1+FA2) then the final state of FA3 will be declared final if:	It corresponds to any of the final states of FA1 or FA2
17.	If we have the finite language and the number of states in the FA is n then the maximum number of letter in each word of the language that will be accepted by the given FA will be :	n+1
18.	Which of the following state is introduced while developing NFA for the closure of FA?	An initial state which should be final as well
19.	Length of EVEN-EVEN language is_____	Even
20.	If FA1 corresponds to (a+b)* then FA1 must accept_____ strings/strings.	Every
21.	In FA, initial stage is represented by :	Drawing an arrowhead before the state
22.	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?	Mealy machine
23.	Length of machine "AbBAbcd" defined over $\sum$=(Ab,B,c,d) is_____.	Five
24.	An FA is a collection of:	Finite states , finite transition and finite input

		letter
25.	Given the language L={ab, aa, baa}, which of the following strings are in L*? i) abaabaaabaa ii) aaaabaaaa iii)baaaaabaaaab iv)baaaaabaa	1,2 & 4
26.	In the context to make NFA for the concentration of FA1 and FA2 (FA1 accepting null string) which of the following option is correct?	Final states in both FAs
27.	Every ___ is a ___ as well, but the converse may not be true.	FA, TG
28.	NFA with null string has ____ initial state(s).	One
29.	While finding RE corresponding to a TG, we connect the new start state with the old start state by____ transition.	Null
30.	If S=(x). then S* will be_____.	{^,x,xx,xxx,xxxx….}
31.	The minimum length of string (except null string) of a language that starts and ends in the same letter will be:	2
32.	If S={ab, bb} , then S* will not contain_____.	bbba
33.	Which of the following machine has only one initial state?	Moore machine
34.	Which of the following diagram is very rigid in order to express any language?	FA
35.	Let L be the language of all strings, defined over ∑ =(0,1), ending in 111. Which of the following strings are indistinguishable w.r.t L with z being 11?	111,101
36.	Mealy machine can have _____ final states.	Zero
37.	In Moore machine , output is produced over the change of:	States
38.	Lets we have two regular expressions R1 ={xx+yy}and R2={x+y} . Which one of the following is the correct regular expression for the union of R1 and R2?	(xx+yy)+ (x+y)

39.	FA corresponding to an NFA can be built by introducing a state corresponding to the combination of states, for a letter having	No transition at certain state
40.	The situation there is no way to leave after entry is called	Davey john locker
41.	Which one of the following word is not accepted by the given regular expression?	Abbaab
42.	According to the theory of automata, there are _____ types of languages.	Two
43.	Which of the following word is not accepted by the given regular expression?	Baabaabba
44.	Regular languages are closed under the following operations.	Union, Concentration , Closure
45.	There can be more than ____ FA for a certain language but for ____FA there is only one language associated with it.	One, one
46.	There is no compulsion that each state must have an on outdoing edge for every input variable in:	Transition graph
47.	FA is also called_____.	DFA
48.	If r1 and r2 are regular expressions then (r1*r2) is_____	RE (Regular expression)
49.	Which of the following is the minimal number of states for a finite automaton accepting the language of all strings defined over any alphabet set?	1
50.	Keeping view language of all strings ending with 'a' for which symbol we will take a loop on the final state of its transition diagram?	A
51.	Which of the following statements is true about NFA with Null String?	Transition of null string is allowed in any stage
52.	Which one of the following diagrams expresses languages more simply?	GTG
53.	The language of all strings defined over alphabet	a and ^

	set={a,b} that does not end with 'a' actually end with:	
54.	Let S={aa,bb}, then S* will have the _____ string.	^
55.	Formal is also known as_____.	Syntactic language
56.	There may be more than one transition for a certain letter on a state in:	Non-Deterministic finite automata
57.	A loop at a state is supposed to be_____transition while converting Moore machine into an equivalent Maley machine.	Incoming
58.	FA of EVEN language shows null string when_____.	initial state is final as well
59.	Which of the following statement is true about GTG?	Transitions are based on regular expressions
60.	Which of the following machine has only one initial state and no final state?	Moore machine
61.	In GTG, there can be more than one :	Start state and final state
62.	GTG for the expression (aa+aba)* may have minimum number of states.	1
63.	In regular expression, the operator '*' stands for.	Iteration
64.	If we have only one state having no transition for input letters, then it is an example of:	NFA
65.	If A and B are regular languages, !(A'U B') is:	Regular
66.	A _____ with "n" states must accept least one string of length greater than "n".	DFA
67.	If r1 is a regular expression then (r1)* is _____.	Also a regular expression
68.	Which of the following is the bypass and state elimination step in the context of Kleene's theorem part II proof?	4
69.	Which of the following is free of non-	FA

	determinism?	
70.	There is no question of accepting any language in:	Moore machine
71.	A string will be accepted by an NFA if there exist_____one successful path.	atleast
72.	Kleene's theorem part I expresses the relationship between_____	FA and TG
73.	Keeping in view the discussion by Martin, how any states are required to recognize the language of all strings of length 2 or more defined over ∑={a,b} with 'b' being the second letter from right?	7
74.	FA and _____ are same excepts that _____has unique symbol for each transition.	NFA,FA
75.	Subtraction of binary number is possible through.	Both complementing and incrementing machine
76.	Null strings can be specified on edges in:	Transition graph
77.	What is false about the PLAINDROME LANGUAGE?	FA can be build for it
78.	While finding RE corresponding to a TG, if TG has more than one start state then.	Introduce the new start state
79.	All possible combination of string of a language including null string is referred as.	Kleene star closure of a language
80.	N! will be equal to:	n*(n-1)!
81.	Every NFA can be considered to be a____ as well, but the converse may not be true.	TG
82.	In proving Kleene theorem II , if three statuses are connected then middle state is removed bt connecting first and third and writing corresponding RE in:	Concentration
83.	In _____ there must be transition for all the letters of the string.	FA

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84.	For a given Moore Machine , the input string is '101010' , thus the output string would be of length:	Length of input string+1
85.	The FA can be drawn for the regular expression (a+b)* with minimum_____ state(s).	1
86.	Which of the following does not contribute while finding out the length of strings?	^
87.	The language of all strings defined over alphabet set ={x,y} that ends with same letters will have the maximum length of:	Infinite
88.	Considering FA1 and FA2 having 2 states each. Now FA1+FA2 can have maximum_____ number of states.	More than 3
89.	Which one of the following is RE for the language defined over ∑={a,b} having all the words starting with a?	a(a+b)*
90.	An _____ can be considered to be an intermediate structure between finite automaton and transition graph.	NFA
91.	In order to make NFA for the union of FA1 and FA2, the new initial state should be liked to:	Initial states of both FAs
92.	We cannot construct an NFA for the language of _____ defined over alphabet set{a,b}.	Palindromes
93.	The CFG is said to be ambiguous if there exist at least one word of its language that can be generated by the …… production trees	More then one / Different
94.	What do automata mean?	something that works automatically / "something are done automatically
95.	According to theory of automata there	2
96.	The Minimum length of the string (except bull string) of a language that starts and ends in the same letters will be:	1

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97.	If S= {ab,bb} then S* will not contain_____	Bbba
98.	Which of the following machines has only one initial state and no final state?	More machine
99.	Which of the following diagram is very rigid in order to express any language ?	FA
100.	If S={a},then S+will be_____	{a,aa ,aaa , aaaa…}
101.	Let L be the language of the all string defined over over∑ ¿{0,1} ending in10. Which of the following string are indistinguishable with respect to L with z being 11?	010,101
102.	Melay machine can have _____final state	Zero
103.	Given the Language L = {ab, aa,baa},which of the following string are in L*? 1) Abaabaaaabaa 2) Aaaabaaaa 3) Baaaaabaaaaab 4) baaaaabaa	1, 2 and 4
104.	If L1 and L2 are regular Language $L1 \cap (L2 \cup L1)$ will be	Regular
105.	In Mealy Machine the out put depends on_____	Present State and present output
106.	There is no question of accepting any language in.	Moore Machine
107.	The state where there is no way to leave after entry is called___	Davey john Locker
108.	FA corresponding to an NFA can be built by introducing an empty state for a letter having	No transaction at certain state
109.	Which of the following diagram express language more simply?	GTG
110.	Automata is the plural of_____	Automation
111.	If A and B are regular Language !(A∪B) is	Regular
112.	In NFA having no transition at certain state FA can be built by introducing.	Empty state

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113.	Consuming FA1 and FA2 having 2 STATES each. Now FA1+FA2 can have maximum_____number of state	2 3 More then 3 None of the given
114.	In an FA when there is no path starting from initial state and ending state in final state then that FA_____	Accept all string
115.	According to theory of automation there are_____type if language	Two
116.	In Moore machine if the length of input string is 9 then the length of output string will be.	10
117.	When ODD language is expressed by an FA,then it will have minimum ____ state	One
118.	[(a+b)(a+b)]*.given RE contact generate the string_____	Bbbbbb
119.	Which of the following state is true about GTG?	Transection are based on regular expression
120.	Every_____is a _____ as will, but the converts may not be true.	FA,TG
121.	Which 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?	Mealy Machine
122.	The recursive method for defining a language has ____ steps	Three
123.	Consider the following RE. A(a+b)b* All of the following word are accepted except_____	Aa
124.	Which of the following regular expression represented same language? 1. (a+ab)* 2. 2(ba+a)* 3. A*(aa*b)*	1 and 2

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	4. (a*b)*	
125.	For every there regular expression R,S and T the Language denoted by R(S∪T) and (RS)∪(RT) are the	Same
126.	Alphabet S={a,bc,cc} has____number of letters.	Three
127.	An____can be considered to be an intermediate structure between Finite automation and Transition Graph.	NFA
128.	Two FAs are said to be equivalent if they_____	Accept same language
129.	There may be more then one transition for a certain letter on a state in	Finite Automata
130.	_____can also help in proving Kleene Theorem III.	NFA
131.	Kleene Theorem Part II expression the relationship between____	TG and RE
132.	FA corresponding to an NFA can be built by introducing an empty state for a letter having.	No transition at certain state
133.	FA is also called	DFA
134.	If two Res generated same language then these Res are called ___	Equivalent RE
135.	We cannot an NFA for the language of ____ defend over alphabet set{a,b}	Palindromes
136.	Kleene Theorem Part II expression the relationship between____	RE and FA
137.	Let FA3 an FA corresponding to FA1 FA2 then the initial state of FA3 must correspond to the initial state of	FA1 only
138.	Every FA should be___	Deterministic
139.	The minimum length of string (except null string) of a language that starts and ends in the different letter will be:	1
140.	Which of the following will be the final state of FA3 obtained from the union of FA1 and FA2?	Final states of FA1 or FA2
141.	In concatenation we accept the initial state of FA2 automatically after the final state of FA1	We need just one initial

	because of:	state
142.	Let FA1 accepts many strings and FA2 accepts none then FA1+FA2 will be equal to:	FA2-FA1
143.	The language {a ab aba bab} is _____ .	Regular
144.	Decomposing a string into its valid units is referred as:	Tokenizing
145.	Let FA3 be an FA corresponding to FA1+FA2, then the initial state of FA3 Must corresponds to the initial state of	FA1 or FA2
146.	If FA1 corresponds to (a+b)* then FA1 must accept _____ string/strings. Select correct option: No Odd length	EVERY
147.	A regular language can be:	irregular infinite non-deterministic **None of the given options**
148.	N into its valid units is referred as:	Tokenizing
149.	The strings of FA2 are accepted first before the strings of FA1	Palindromes
150.	There _____ a language for which only FA can be built but not the RE.	Be may
151.	Kleene's Theorem part I expresses the relationship between ___	FA and TG