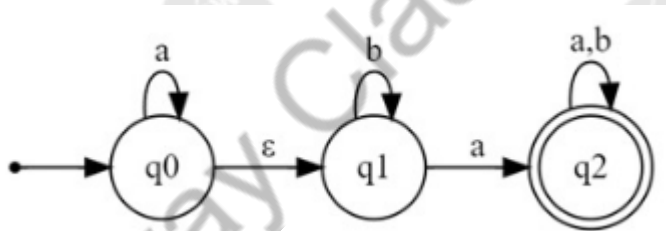


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Most Imp. Questions

Unit -1

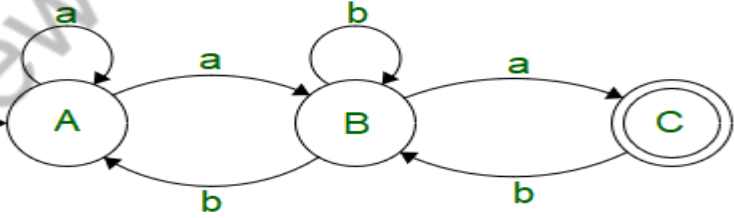
1.	Convert the following 1.Epsilon NFA TO NFA/NDFA 2.NFA TO DFA 3. Minimized DFA	 <pre> graph LR start(()) --> q0((q0)) q0 -- a --> q0 q0 -- ε --> q1((q1)) q1 -- b --> q1 q1 -- a --> q2(((q2))) q2 -- "a,b" --> q2 </pre>
2.	Explain the mealy and moore machine and construct the moore and mealy machine that take all string of a and b as input and count number of a in the input string in terms of 1 $\Sigma = \{a,b\}$ $\Delta = \{0,1\}$ Note: any other mealy moore machine also come for this refer notes	
3.	Any numerical 1. Mealy to moore conversion 2. Moore to melay conversion	

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Most Imp. Questions

Unit -2

Unit -2	
1.	convert the following regular expression to epsilon NFA as well as NFA 00^*+1
2.	<p>Explain closure properties of regular language as and explain the ADREN THEROM and find of the regular expression of the following</p> <div style="text-align: center;">  <pre> graph LR Start(()) --> A((A)) A -- a --> A A -- a --> B((B)) B -- b --> A B -- b --> B B -- a --> C(((C))) C -- b --> B style Start fill:none,stroke:none </pre> </div>
3.	Explain the pumping lemma for regular language. And prove the $a^n b^{2n} \quad n \geq 1$ is not a regular language and also explain what is kleene theorem

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Most Imp. Questions

Unit -3

Unit -3	
1.	<p>Explain Chomsky hierarchy and parse tree</p> <p>$E \rightarrow E+E/E-E/a/b$</p> <p>Drive the leftmost derivation right most derivation and make a parse tree and check whether the grammar is ambiguous or not if yes then make it unambiguous,</p>
2.	<p>What is recursion ,left recursion and right recursion and elimination the left recursion from the following.</p> <p>$A \rightarrow Abd/Aa/a$</p> <p>$B \rightarrow Be/b$</p>
3.	<p>Convert the following into Chomsky normal form and then convert into Greibach normal form</p> <p>$S \rightarrow ASA/Ab$</p> <p>$A \rightarrow B/S$</p> <p>$B \rightarrow b/\epsilon$</p>
4.	<p>Explain decision properties of Regular language and explain the pumping lemma for regular lanaguageand show $a^p p \text{ is prime number}$ is not a CFL</p>

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Most Imp. Questions

Unit -4

Unit -4	
1.	<p>What is PDA? Design a PDA for-</p> <ol style="list-style-type: none"> 1. $a^n b^n \ n \geq 1$ 2. $a^n b^{2n} \ n \geq 1$ 3. WCW^r <p>or any other PDA WILL COME</p>
2.	<p>What is two stack PDA? Design two stack PDA for</p> <ol style="list-style-type: none"> 1. $a^n b^n c^n \ n \geq 1$ 2. $a^n b^n c^n d^n \ n \geq 1$
3.	<p>Convert cfg to PDA</p> <p>$S \rightarrow aSb$</p> <p>$S \rightarrow ab$ test with $aaabbb$</p> <p>and also explain PDA acceptance by empty stack and final state.</p>
4.	<p>Convert the PDA TO CFG any numerical (Refer notes)</p>
5.	<p>Explain decision properties of CFL</p>

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Most Imp. Questions

Unit -5

<h4>Unit -5</h4>	
1.	What is Turing machine ? Explain it with example and explain different variants of Turing machine
2.	Design a Turing machine of 1. $a^n b^n$ $n \geq 1$ 2. Odd length palindrome 3. Even length palindrome or any Turing machine can come.
3.	What is universal Turing machine? How universal Turing machine can be considered as model of digital computer.
4.	Write a short note on- 1. Halting problem is un-decidable. 2. Church thesis and strong Church thesis. 3. Recursive language and recursively enumerable language. 4. Closure properties of recursive language. 5. PCP And Modified PCP any numerical on PCP.
5.	Explain the modification done in finite automata to make it PDA and Turing machine.