

Date: _____

ID No

13943

Name

Mehran Ad: Shah

Subject

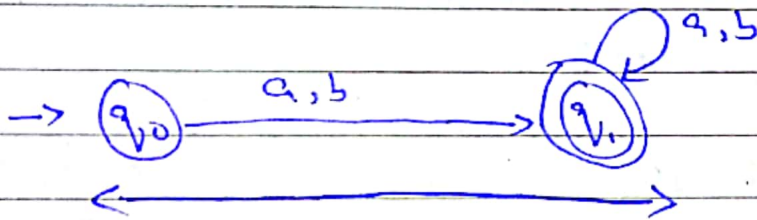
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Date / 22 / 6 / 2020

Question 1:

Answer:

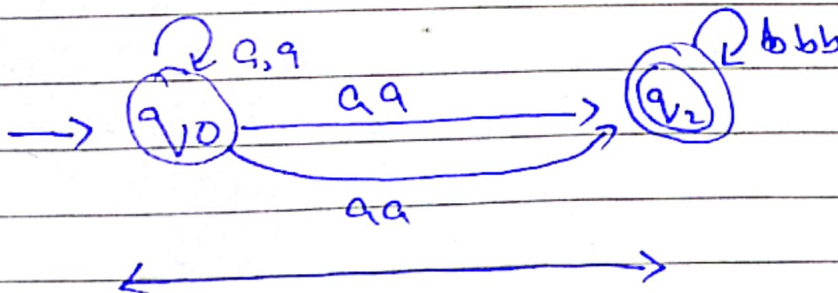
Beginning from and ending same Letters



Question 2:

Answer:

An FA which has quadruple a's or triple b's



Question 3:

Answer:

(i) All the words having even Length

$((a+b)(a+b))^x$

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(ii) All words having at least three a or triple b

$$(a+b)^x aaa (a+b)^x bb (a+b)^x$$

(iii) All words having at least double a or triple b.

$$(a+b)^x (aa + bbb) (a+b)^x$$

(iv) All words starts with double a or ~~triple~~ quadruple b.

$$aa + bbb (a+b)$$

Question 4:

Answer

Mealy Machines

A Mealy machine generates an output based on its current state and output. So the state diagram will include both an input and output signal for each transition edge.

The output change asynchronously with the enabling clock edge.

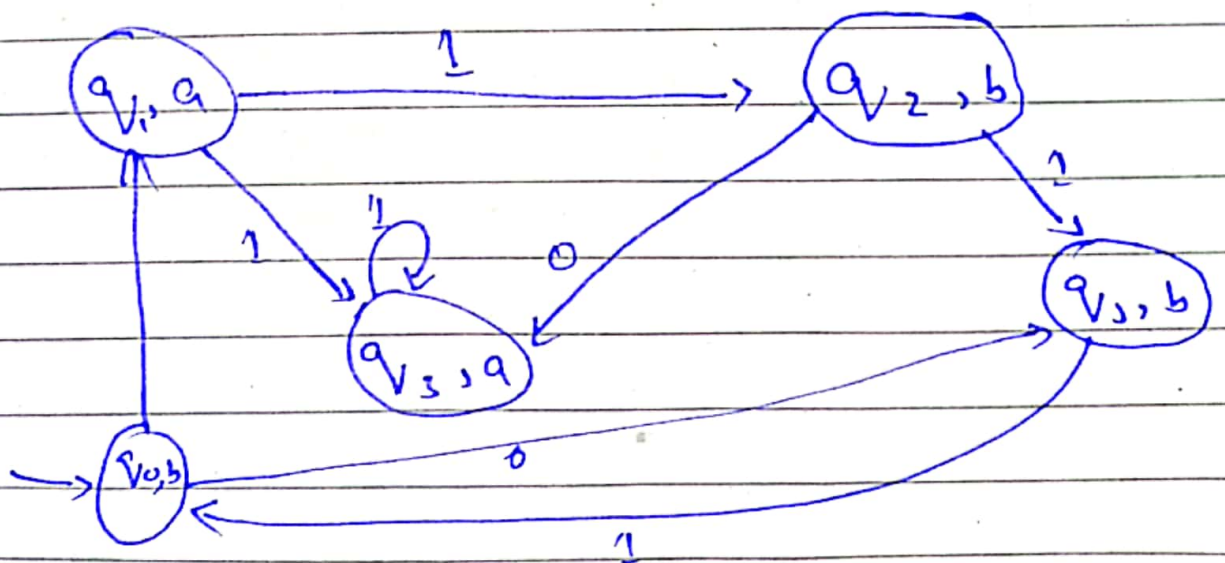
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A Mealy machine will have the same number or fewer states than a Moore machine.

Moore Machine:

The output of this depends only on the machine's current state, transitions are not directly dependent upon input.

The outputs change when the state changes and the state change is synchronous with the enabling clock edge, outputs change synchronously with this clock edge.



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Question 6.

Answer

Transition table

<u>State</u>	<u>a</u>	<u>b</u>
1 -	2	6
2	3	x
3 +	x	4
4	x	5
5 +	x	x
6	10	7
7	y	8
8	y	y
9 +	y	y
10	y	11
11 +	y	y
x	x	x
y	y	y