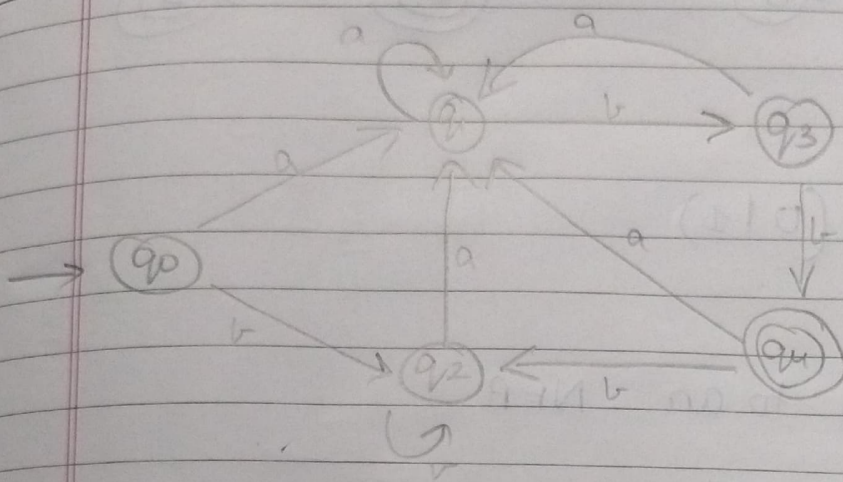


Ans 1

Minimize DFA



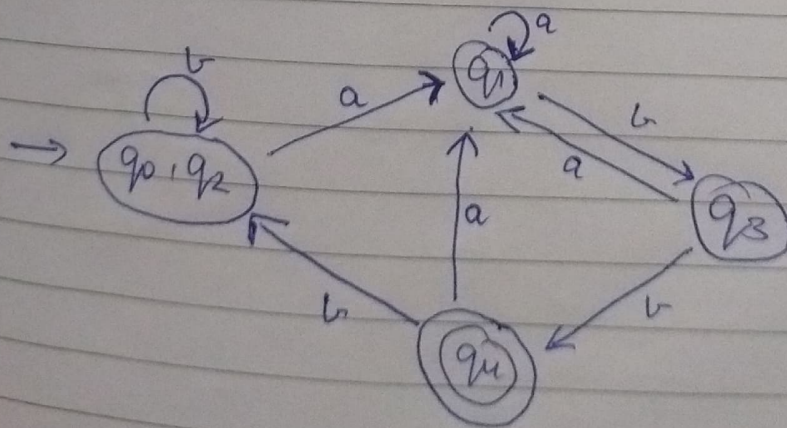
→ ~~q0~~

	a	b
q0	q1	q2
q1	q1	q3
q2	q1	q2
q3	q1	q4
* q4	q1	q2

compare all states and arrange accordingly.

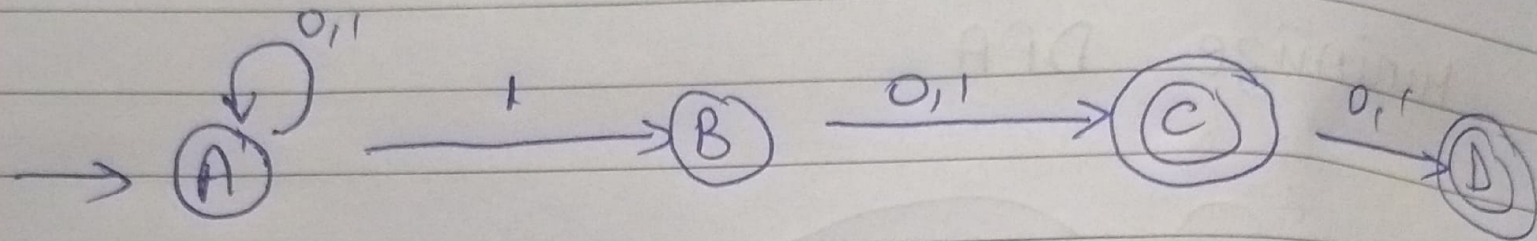
$\{q_0, q_1, q_2, q_3\} \quad \{q_4\}$

$\{q_0, q_2\} \quad \{q_1\} \quad \{q_3\} \quad \{q_4\}$



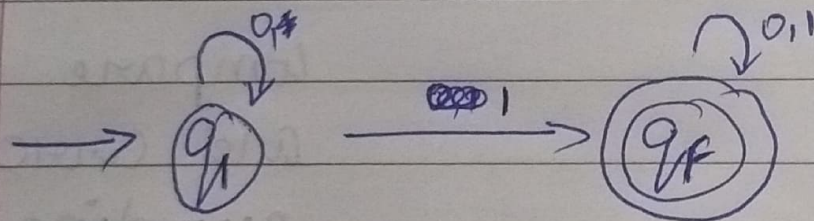
Minimize DFA

2) NFA to Regular Expression



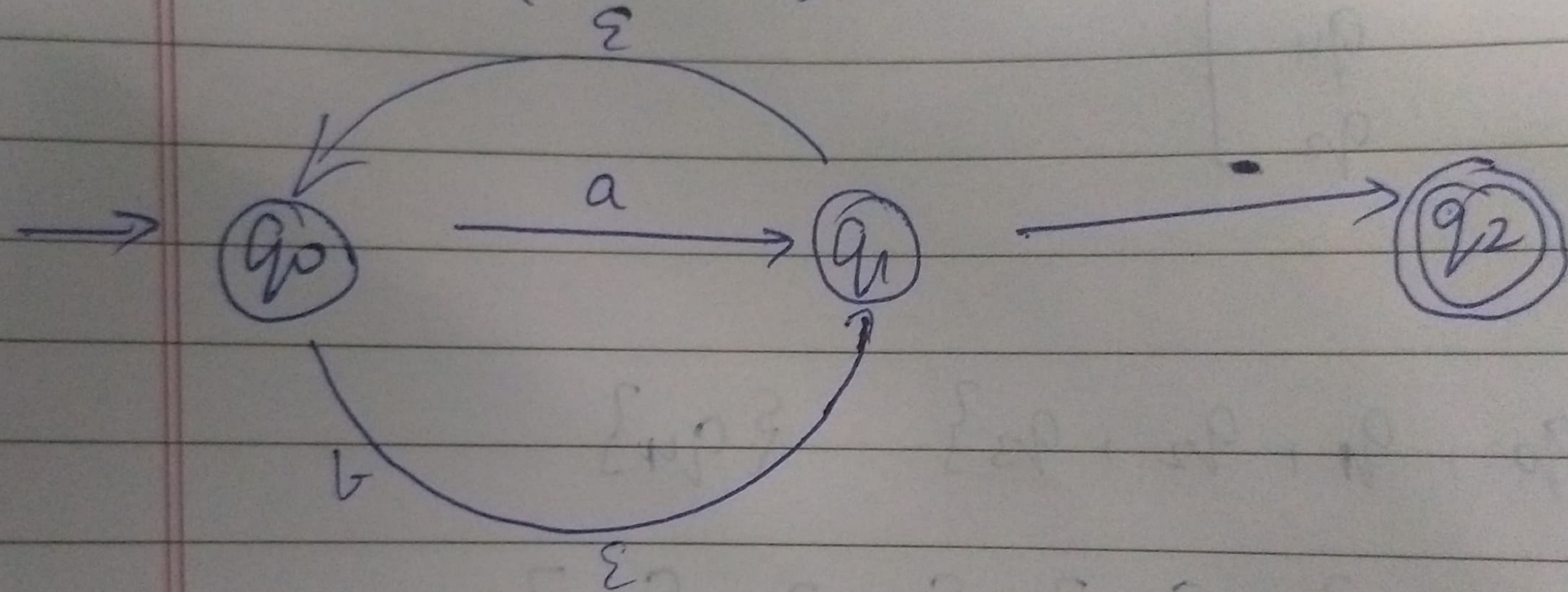
$(0|1)^* 1 (0|1) (0|1)$

3) $(0+1) 1 (0+1)$ to an NFA



4)

$a(b+c)^*b$



Ques 6 Regular expression for one 'a' over $\Sigma = \{a, b, c\}$

Ans $(b+c)^* a (b+c)^*$

accepted strings

a

ba

ca

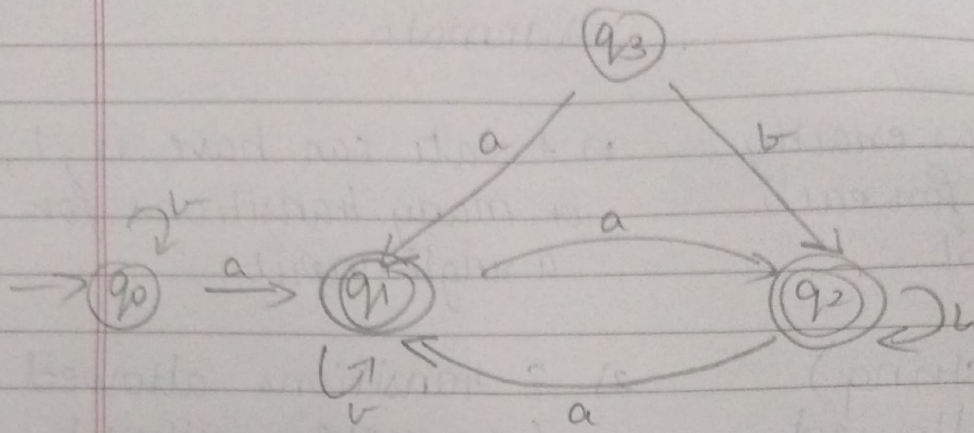
bca

cab

bbac

ccbac

7 Minimize DFA



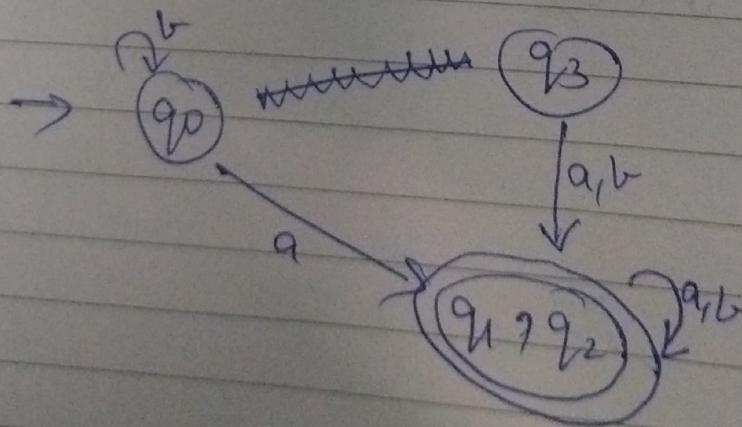
	a	b
→ q ₀	q ₁	q ₀
* q ₁	q ₂	q ₁
* q ₂	q ₁	q ₂
q ₃	q ₁	q ₂

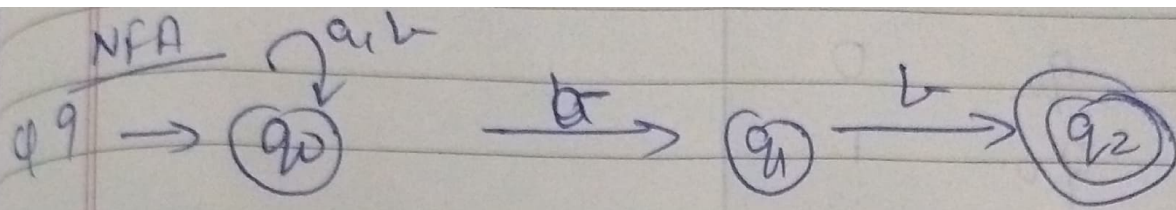
{ q₀, q₃ }

* { q₁, q₂ }

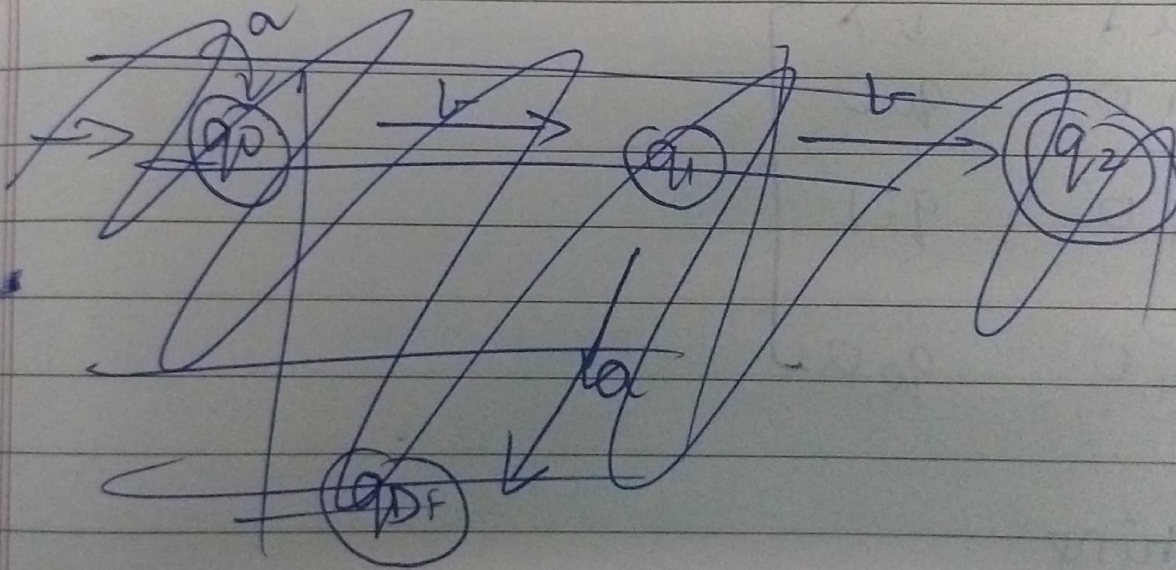
{ q₀ } { q₃ }

{ q₁, q₂ }

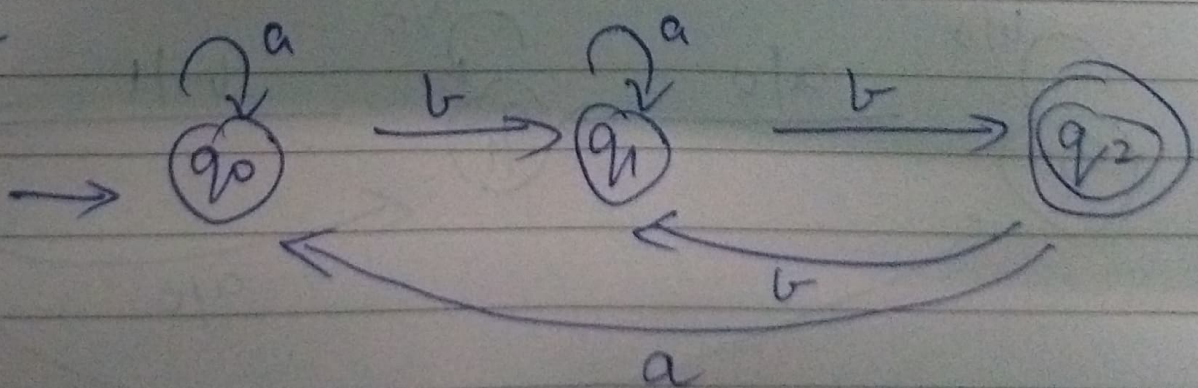


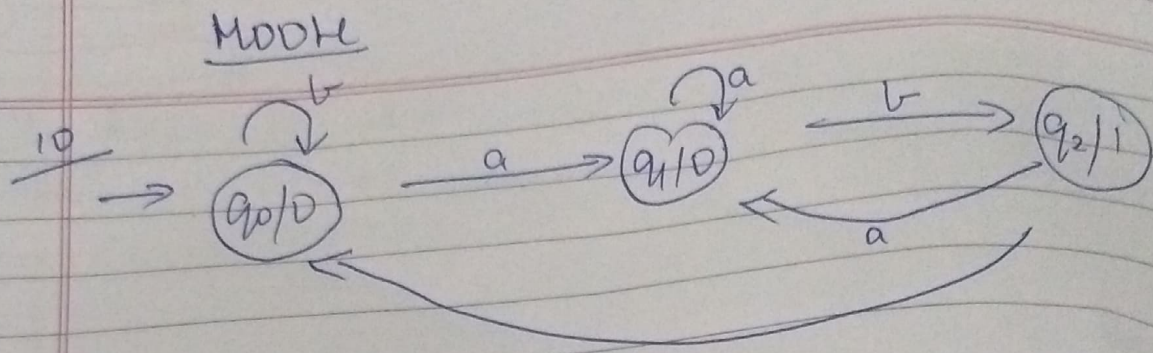


into DFA



Ans 9





MOORE T.T

	a	b	λ
q_0	q_1	q_0	0
q_1	q_1	q_2	0
q_2	q_1	q_0	1

Mealy T.T

	a λ	b λ
q_0	q_1 0	q_0 0
q_1	q_1 0	q_2 1
q_2	q_1 0	q_0 0

Mealy Machine

