

(1)

	δ	0	1
\rightarrow	A	B	E
	B	C	F
*	C	D	H
	D	E	H
	E	F	I
*	F	G	B
	G	H	B
	H	I	C
*	I	A	E

B	X							
C	X	X						
D		X	X					
E	X		X	X				
F	X	X		X	X			
G		X	X		X	X		
H	X		X	X		X	X	
I	X	X		X	X		X	X
	A	B	C	D	E	F	G	H

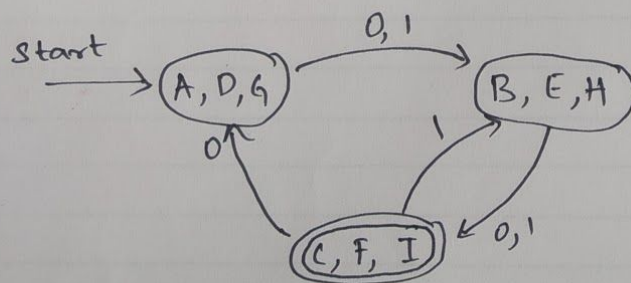
In distinguishable pairs:-

(A, D) (A, G) $(D, G) \Rightarrow (A, D, G)$
 (B, H) (B, E) $(E, H) \Rightarrow (B, E, H)$
 (C, F) (C, I) $(F, I) \Rightarrow (C, F, I)$

Transition table:-

	δ	0	1
\rightarrow	(A, D, G)	(B, E, H)	(B, E, H)
	(B, E, H)	(C, F, I)	(C, F, I)
*	(C, F, I)	(A, D, G)	(B, E, H)

Transition Diagram:-



(2)

δ	0	1
$\rightarrow q_1$	q_2	q_3
q_2	q_3	q_5
* q_3	q_4	q_3
q_4	q_3	q_5
* q_5	q_2	q_5

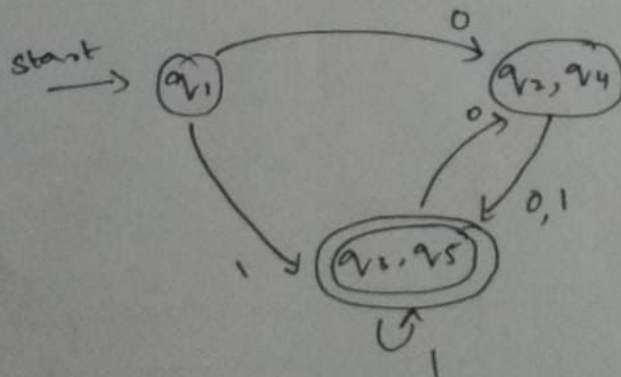
q_2	X			
q_3	X	X		
q_4	X		X	
q_5	X	X		X
	q_1	q_2	q_3	q_4

Indistinguishable pairs:-
 (q_2, q_4) , (q_3, q_5)

Transition table -

δ	0	1
$\rightarrow q_1$	(q_2, q_4)	(q_3, q_5)
(q_2, q_4)	(q_3, q_5)	(q_3, q_5)
* (q_3, q_5)	(q_4, q_2)	(q_3, q_5)

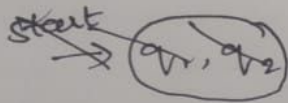
DFA:-



	δ	0	1
\rightarrow	q_1	q_2	q_6
	q_2	q_1	q_3
*	q_3	q_2	q_4
	q_4	q_4	q_2
	q_5	q_4	q_5
*	q_6	q_5	q_4

q_2	X				
q_3	X	X			
q_4	X	X	X		
q_5	X	X	X	X	
q_6	X	X	X	X	X
	q_1	q_2	q_3	q_4	q_5

Indistinguishable pairs - No pair.
 (q_1, q_2)



DFA :-

