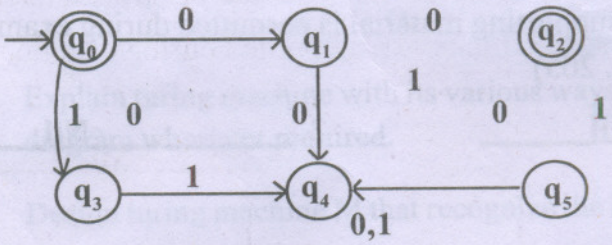
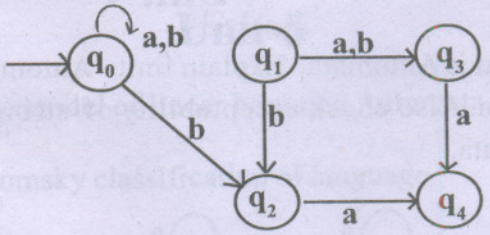
Present state	Next state			
	a=o		a=1	
	state	o/p	state	o/p
q_1	q_1	1	q_2	0
q_2	q_4	1	q_4	1
q_3	q_2	1	q_3	1
q_4	q_3	0	q_1	1

Or

1 (a) Construct a minimum state automata equivalent to the DFA described by the figure given below : 8



(b) Construct a DFA equivalent to the NDFA M where transition diagram is given below: 8



Unit - II

.2. (a) What is Myhill-Nerode theorem. Explain. Also prove that L is regular language, if L consisting of all strings over {a,b}. 8

(b) Consider DFA m= ($\{q_0,q_1,,q_2\}$,{a,b),s,q_0,$\{q_1,,q_2\}$) such that s(q_0,a) = q_2,s(q_1,b) = q_1,s(q,,a) =q_0,s(q_1,b) =q_1, s(q_2,a) =q_2, s(q_2,b) =q, find out regular expression for the language accepted by M. Also express the language. 8