

"FINAL TERM"

NAME:- HAMMAD FIR

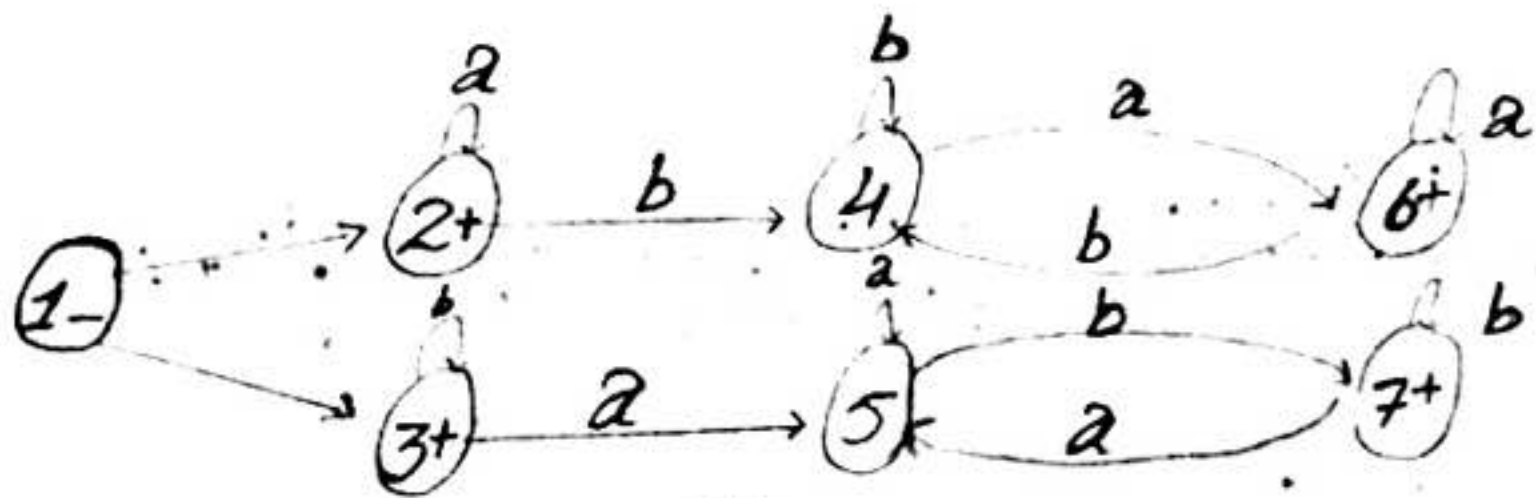
I.D.:-

"6961"

Ans: Build an FA accepting the language beginning with 'a' and ending in 'a'.

Solution:- The language L may be expressed by the following regular expression
 $(a+b)^* a (a+b)^* b$

This language L may be accepted by the following FA.



- a. $(a+b) (a+b)^*$
- b. $(a+b)^* (aaa)^+ (bb)^+ (ab)^*$
- c. $(a+b)^* (aaa)^+ (a+b)^+(a+b)^*$
- d. $aa(a+b)^* + (bbbb)(a+b)^*$

Figure 2:

Transition Table

States	a	b
1 -	2	6
2	3+	x
3+	x	4
4	x	5+
5+	x	x
6	10	7
7	y	8
8	9+	y
9+	y	y
10	y	11+
11+	y	y
x	x	x
	y	y

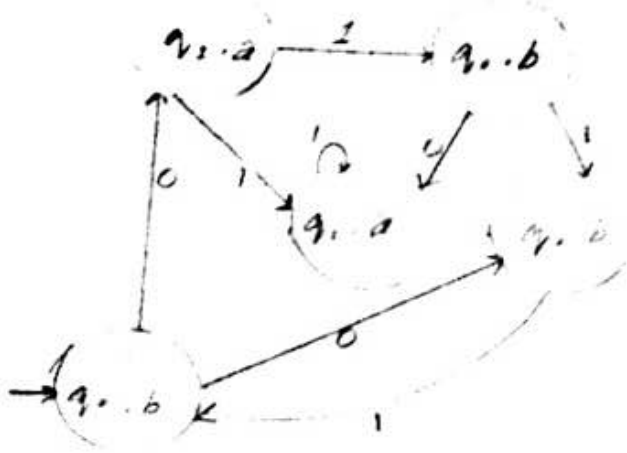
Distinguish between Moore and Mealy machine and convert the following Mealy machine to Moore in figure 1.

Mealy Machine

A mealy machine is defined as a machine in theory of computation whose output values are determined by both its current state and current inputs.

Moore Machine

A moore machine is defined as a machine in theory of computation whose output values are determined only by its current states.



(Mealy to Moore conversion)

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

