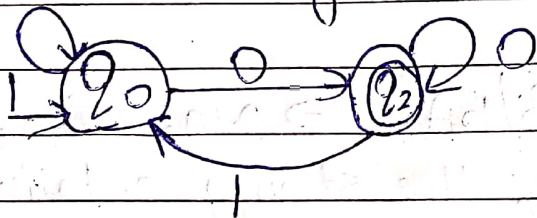


Sec → 7

Q3) Construct a DFA for the language that contains the strings ending with 0. Eliminated unit production in grammar.  $S \rightarrow A/bb$   $A \rightarrow B/b$   $B \rightarrow s/a$

Soln

let strings be  $\{0\}$ ,  $\{1,0\}$ ,  $\{0,0\}$ ,  $\{1,1,0\}$ , etc.



$$Q = \{q_0, q_2\}$$

$$\Sigma = \{0, 1\}$$

$$q_0 = \{q_0\}$$

$$F = \{q_2\}$$

S in diagram.

Page: .

Date: / /

A grammar or phrase structured is combination of four tuples & can be represented as  $(G(V, T, P, S))$

where,

$V$  -  $V$  is a finite non-empty set of variable / non-terminals.

$T$  -  $T$  is a finite non-empty set of terminals.

$P$  -  $P$  are called production or production rule or writing rules.

$S$  -  $S$  is special variable / non-terminal know as starting symbol.