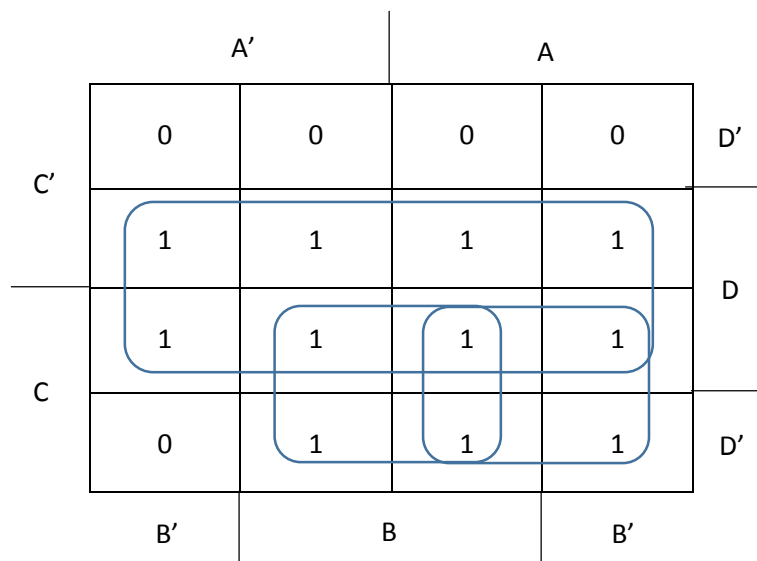


9.1

Truth table

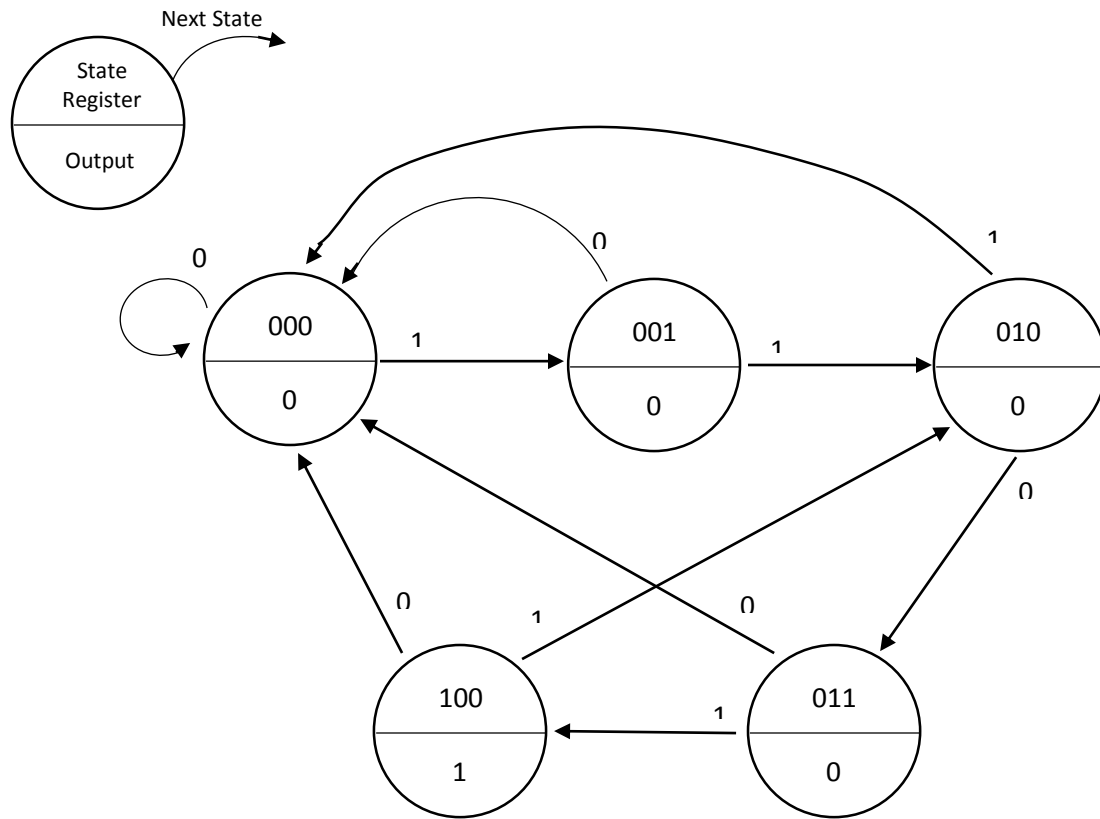
A	B	C	D	Output
0	0	0	0	0
0	0	0	1	1
0	0	1	0	0
0	0	1	1	1
0	1	0	0	0
0	1	0	1	1
0	1	1	0	1
0	1	1	1	1
1	0	0	0	0
1	0	0	1	1
1	0	1	0	1
1	0	1	1	1
1	1	0	0	0
1	1	0	1	1
1	1	1	0	1
1	1	1	1	1



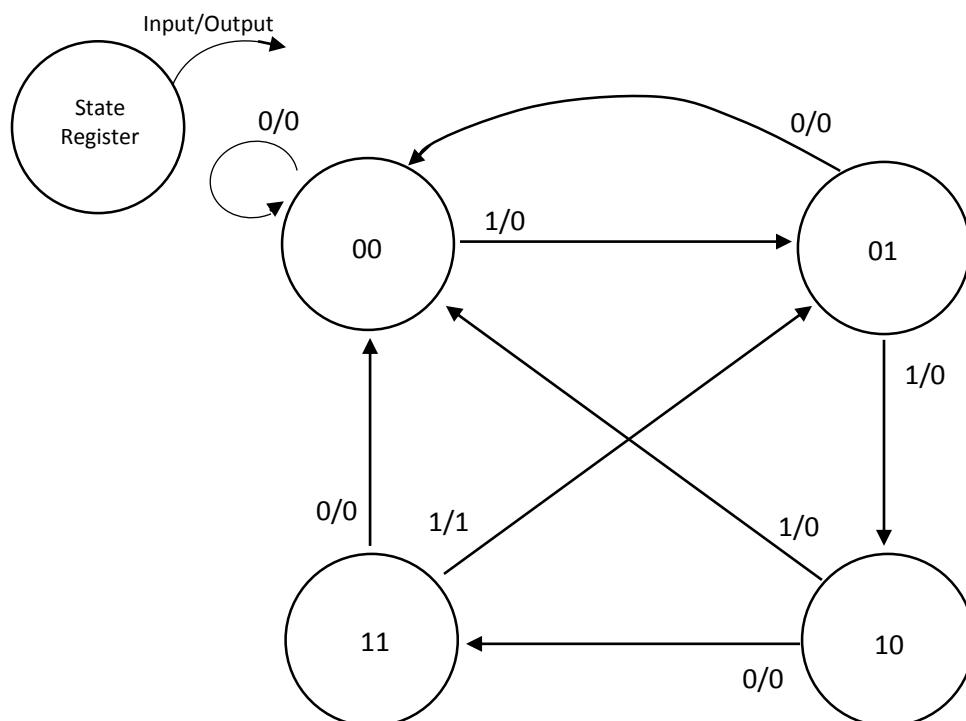
$$F = D + B \cdot C + A \cdot C$$

9.2

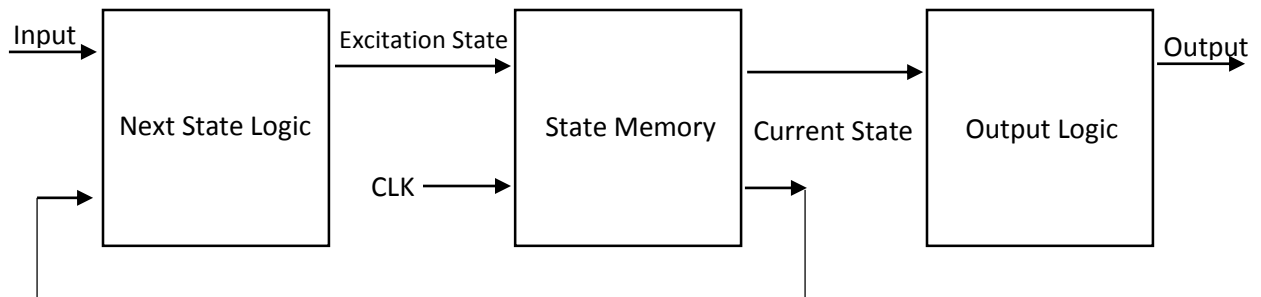
Moore Model



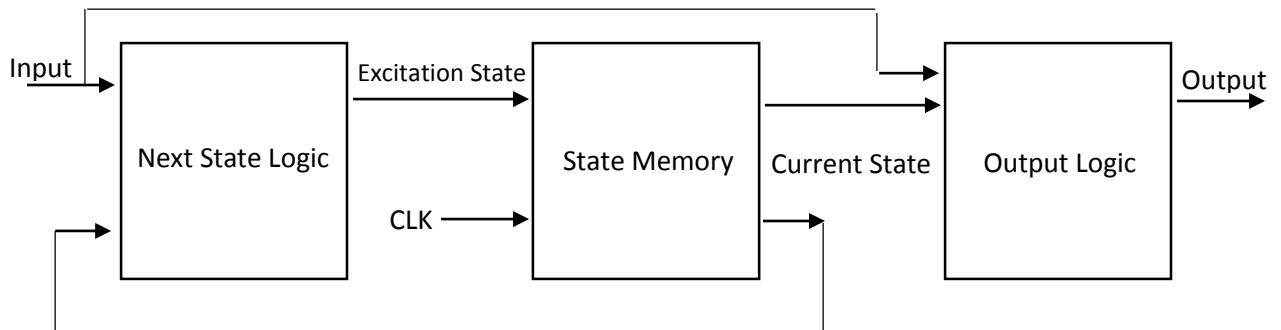
Mealy Model



Block Diagram – Moore Model



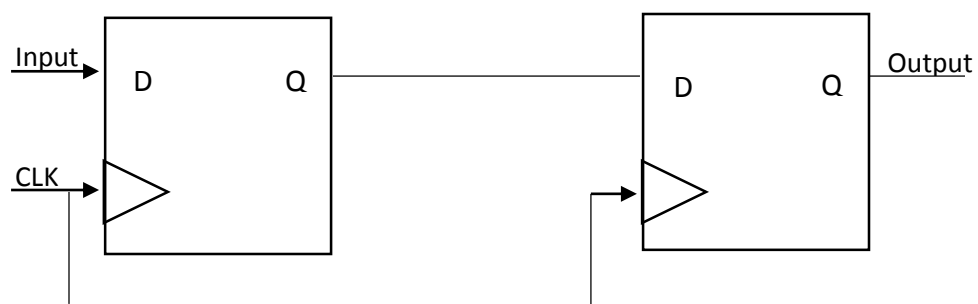
Block Diagram – Mealy Model



In Mealy Model, current state and current input will affect the output

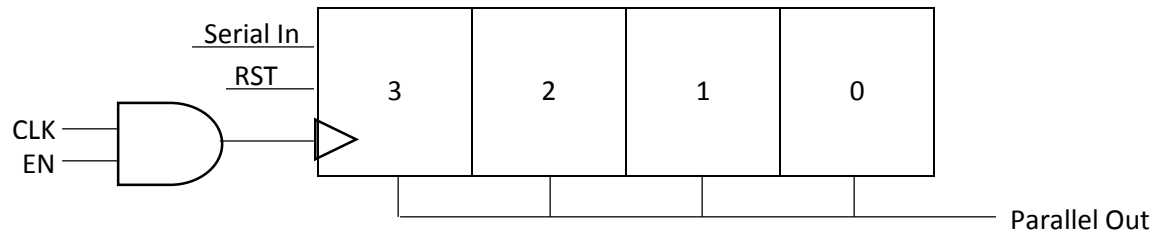
9.3.1

2 Flip-Flop synchronizer



9.3.2

Most Significant Bit First Serial to Parallel Shift Register



9.3.3

Most Significant Bit First Parallel to Serial Shift Register

