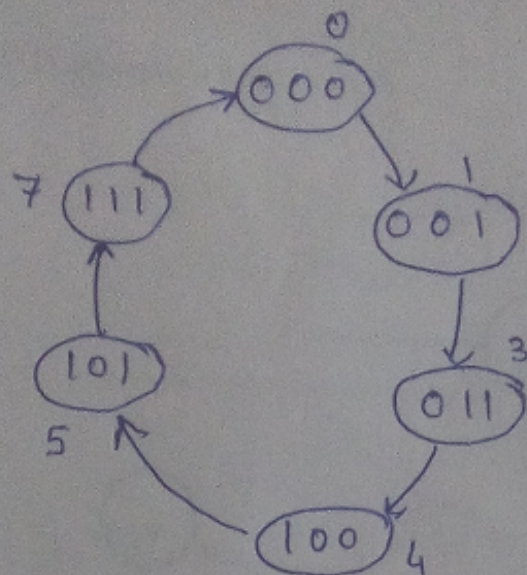


Step 1) : Create State diagram:-



→ 6 states

⇒ hence at least 3
T.F.F has to be
Used.

Step 2) Create state Table and merge it with
Excitation table of T.F.F.

State Table:

Present state			Next State		
Q_A	Q_B	Q_C	Q_A'	Q_B'	Q_C'
0	0	0	0	0	1
0	0	1	0	1	1
0	1	1	1	0	0
1	0	0	1	0	1
1	0	1	1	1	1
1	1	1	0	0	0

Excitation Table:

Q_n	Q_{n+1}	T
0	0	0
0	1	1
1	0	1
1	1	0

Q_A	Q_B	Q_C	Q_A'	Q_B'	Q_C'	T_A	T_B	T_C
0	0	0	0	0	1	0	0	1
0	0	1	0	1	1	0	1	0
0	1	0	X	X	X	X	X	X
0	1	1	1	0	0	1	1	1
1	0	0	1	0	1	0	0	1
1	0	1	1	1	1	0	1	0
1	1	0	X	X	X	X	X	X
1	1	1	0	0	0	1	1	1

State
Not
Valid