Flip Flop Conversion

Steps:

- Write the characteristic table and excitation table.

  (required FF- characteristic table and given FF excitation table.

- Simplify the excitation table using K-Map.

- Draw the desired logic diagram.

Excitation Table

SR Flip-flop			
Q(t)	Q(t+1)	S	R
0	0	0	X
0	1	1	0
1	0	0	1
1	1	X	0

D Flip-flop		
Q(t)	Q(t+1)	DR
0	0	0
0	1	1
1	0	0
1	1	1

JK flip-flop			
Q(t)	Q(t+1)	J	K
0	0	0	x
0	1	1	x
1	0	x	1
1	1	x	0

T flip-flop		
Q(t)	Q(t+1)	DR
0	0	0
0	1	1
1	0	1
1	1	0

MCQ

For realisation of JK flip-flop from SR flip-flop, if J=1, K=0 & present state is 0(i.e. Q(n)=0) then excitation input will be _____.

a) S=0, R=1

b) S=X, R=0

c) S=1, R=0

d) S=1, R=1

MCQ

For realisation of SR flip-flop from JK flip-flop, if S=1, R=0 & present state is 0 then the excitation input will be _____.

a) J=1, K=1
b) J=X, K=1
c) J=1, K=X
d) J=0, K=0

MCQ

- **A master-slave flip-flop has the characteristic that:**

A.Change in the input immediately reflected in the output.
B.Change in the output occurs when the state of the master is affected.
C.Change in the output occurs when the state of the slave is affected.
D.Both the master and the slave states are affected at the same time.

MCQ

The characteristic of J-K flip-flop is similar to _____

a)S-R flip-flop
b)D flip-flop
c)T flip-flop
d)Gated T flip-flop

MCQ

- **A feature that distinguishes the J-K flip-flop from the S-R flip-flop is the**

(A)Toggle condition
(B)Preset input
(C)Type of clock
(D)Clear input