

Section 6

Ques: 2

Ans -

Digital sequential logic circuits are divided into synchronous and asynchronous types.

In synchronous sequential circuits the state of the device changes only at

distinct times in response to clock signal.

In asynchronous circuits the state of the response to changes input.

Sequential circuits are those which have the notion of an internal state.

This notion of internal state is needed because in sequential state circuits

the output of the internal state is a function

Both the present input as well as the past inputs, the internal state of a sequential circuit, is nothing but the reflection of the past inputs, the circuit.

Now the internal state of a sequential circuit is represented by number of state.

Flip flop can only represent 2 possible states.

Therefore if we have N flip flops,

we can represent a maximum of 2^N state.

Now the difference between synchronous and asynchronous circuits is that in synchronous circuits, the state goes from one internal state to the next internal state.

Circuits change their state simultaneously with given input clock.