

Answer on Question #43501 – Engineering - Other

What are sequential circuits? Explain differences between sequential circuits and combinational circuits

Solution:

A **combinational circuit** neither contains a periodic clock signal nor has any provisions for storage. There are no feedbacks involved and the output at all time is dependent on the inputs provided. The name combinational is derived from the combinations of logic gates used for such circuits.

A **sequential circuit** involves feedback and has memory (so it is employed for designing RAM). It also has a periodic clock signal and hence the output is also a function of time in addition to being a function of inputs and previous outputs. The name sequential is derived as the output is produced in sequences as the clock circuit enables and disables the functioning. (A latch is also a sequential circuit but has no clock signal and hence is a special case. It is also the basic building block of any sequential circuit.)