

2.1 COMBINATIONAL LOGIC

Combinational circuit is a circuit in which we combine the different gates in the circuit, for example encoder, decoder, multiplexer and de multiplexer. Some of the characteristics of combinational circuits are following –

- The output of combinational circuit at any instant of time, depends only on the levels present at input terminals.
- The combinational circuit do not use any memory. The previous state of input does not have any effect on the present state of the circuit.
- A combinational circuit can have an n number of inputs and m number of outputs.



Figure 1.1 Block diagram

[Source: https://www.tutorialspoint.com/computer_logical_organization/combinational_circuits.htm]

A combinational circuit consists of logic gates whose outputs at any time are determined from only the present combination of inputs and they have no memory. A sequential circuit consists of logic gates whose outputs at any time are determined from both the present combination of inputs and previous output.