**Stuck At fault 1 in 4x16 decoder**

Today's world is surrounded by electronic devices and the building blocks of these devices are ICs(Integrated Chips).But it's hard to digest that the manufacturing of these ICs and their testing of correctness are not that simple as it's appearance looks like.

In digital electronics while modelling various circuit, we carryout its testing to increase our confidence on the proper working of the digital circuit.

There is a rule known as “Rule of 10” which tells that it costs 10 times more to taste a device as we move to the next higher level in the manufacturing process. Now to reduce the cost of maintenance the circuit are tested before fully manufactured.

When a circuit is manufactured, it has many physical faults which cannot be rectify fully but if we focused on the behavioral correctness of the circuit then physical fault may be reduced to some extent.

Now a days the mostly used fault model is “Stuck at fault” model, i.e., stuck at 1 and stuck at 0. When there is stuck at fault 0 it means that after the point where fault is there the output of the wire is 0, where as in stuck at fault at 1 it will be 1. There are some methods to find the fault in the circuit which will be discussed in the later part.