

34066 - TEST ENGINEERING PRACTICAL

DETAILED SYLLABUS

LIST OF EXPERIMENTS

Locate a Short in a circuit Board using Short Locator.

1. Test and verify the combinational logic circuits NAND, NOR, Half-Adder, Half-Subtractors, Multiplexers, De-multiplexer, Decoder & Encoder using functional test method.
2. Test and verify the Sequential Logic Circuits D-FF, RS-FF, Latch, Counter, Shift Register using functional test method.
3. Test and verify the Memory Devices SDRAM/DRAM Chip. using functional test method.
 - a. Test and verify the digital circuits in a circuit using auto compensation technique.
 - b. Test and verify the open emitter circuit using pull down resistor.
 - c. Test and verify the open collector circuit using pull up resistor.
4. Test the functionality of operational amplifier in Inverting, Non-inverting and voltage follower mode.
5. Test the VI characteristics of R, L, C using signature method.
6. Test the VI characteristics of electronic components Diode, Zener Diode, NPN/PNP Transistor using signature method.
7. Test the VI characteristics of RC Filter, Low Pass Filter, Band Pass Filter using signature method.
8. Test the VI characteristics of electronic components MOSFET and Transistor using Trigger pulse and signature method.
9. Test the VI characteristics of electronic components SCR and Opto coupler using Trigger pulse and signature method.
10. Test RLC circuit using in-circuit measurement method.
11. Test the Boundary Scan IC using JTAG port and non boundary scan IC using boundary scan IC.
12. Detect and list down the stuck to VCC and stuck to Gnd pins in a boundary scan IC.
13. Develop a device model for NAND and NOR using device library and create a test pattern for testing.