

# Schedule for fast-track course 12 Days

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## **DESKTOP COURSE 6 Days**

### **1<sup>st</sup> Day -**

Basic electronics & Microcomponents

AC & DC current, intro & testing of Microcomponents, concept of load & source, IC power supply, RTC, concept of Open-short-ground, Logic gates, using multimeter, signal testing using frequency meter

### **2nd Day -**

Practical of using tools

Using SMD Rework Station (BASIC) & replacing components, Jumpering using Solder Iron (BASIC)

### **3rd Day -**

Desktop motherboard

Block diagram, layout & functions of all IC on the circuit

### **4<sup>th</sup> Day –**

Power section functions & fault testing

PWM section, RAM power supply & RAM regulator,

Cke0, Cke1, Ras, Cas, WE, Vddspd voltage signal testing

Power Logic Sequence of desktop motherboard

### **5<sup>th</sup> Day**

Practical session for replacement of IC

Desktop motherboard testing

IO port testing,

PCI SLOT testing- aux, reset, BIOS signal testing

MCH & ICH testing, regulator testing, power logic sequence testing, IO chip testing, clock synth IC testing, RTC Crystal oscillation testing... etc.

### **6<sup>th</sup> Day**

Fault finding & troubleshooting

Solution to different faults, using tester cards for RAM & CPU

Testing using Debug card

## **LAPTOP COURSE 6 Days**

### **7<sup>th</sup> Day -**

Assembly & disassembly of laptop using Service Manual

Sub topics:

Universal inverter replacement for LCD

Keyboard repairing

**8<sup>th</sup> Day –**

Layout of circuit board & daughter boards  
Function of ICs- Gmch, ich, pch, embedded controller...  
Functioning of all peripherals & different slots

**9<sup>th</sup> Day –**

Power section  
Volt IN, Power Rail  
PWM section testing & faults  
RAM power section, RAM regulator testing & faults  
Primary stepdown section testing & faults  
Secondary stepdown section testing & faults  
Charging & discharging section testing & faults

**10<sup>th</sup> Day –**

Schematic reading  
Reading signals of the system board  
Power Logic Sequence of laptop systemboard  
Systemboard Signals-CPU signals, MCH signals, ICH signals, PCH signals, Embedded controller signals,  
LCD signals, HDD signals, Pciex16 graphics signals,...etc  
Trouble shooting

**11<sup>th</sup> Day**

Complete Laptop Systemboard testing & using tester cards

**12<sup>th</sup> Day**

Using BGA Rework station- Reballing of BGA IC  
Using SMD Rework Station (ADVANCE) - Replacement of Gate chips & QFN chips  
Professional Soldering (ADVANCE) - Process of Tining, Wetting, Reflow, Wicking  
BIOS flashing using Willem EEPROM programmer

**Class Timing:**

11am to 2pm class  
2pm to 2:20pm lunch break  
2:30pm to 4pm class  
4pm to 4:15pm Tea break  
4:20pm to 6pm Mobile class (15 days)