# **LAPTIAN TECHNICAL INSTITUTE PUNE**

#### WORK, LEARN, GROW, ONLINE ANYTIME, ANYWHERE

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Since 2010, a decade of change

In computer hardware and laptop repairing education,

No matter what their academic label every student is different and needs to be offered a variety of learning ways.

At Laptian, definitely a satisfaction guarantee to our students, we sincerely fulfill the promise made to our students...

Contact us and we will promptly get in touch with you and share your updated syllabus so you can learn more about our services and updates.

#### **MODULE-1**

#### **ADVANCED LAPTOP REPAIRING COURSE:**

completion of basic computer and laptop repairing course we will start advance training, Advance chip level course will three (3) months where you will learn step-by-step schematic tracing, IC pin function, circuit calculation and internal logic of all regulator circuit, Supply sequence with states and power management which makes you perfect chip-level professional. After an advanced laptop repairing course, no need for anyone's support. You will be able to repair any type of problem yourself on your table.

### Analog electronic components

- ➢ REGISTER
- ➢ CAPACITOR
- > INDUCTOR/ COIL
- > DIODE
- > BIPOLAR JUNCTION TRANSISTOR (BJT)
- CRYSTAL, RTC (BLUE CLK 14.318MHZ, GREEN CLK 24 MHZ, 25MHZ & RTC 32.768 KHZ)
- ➢ MOSFET {VGS(+), VGS(-)}
- ➢ SENCING RESISTOR
- IDENTIFICATION & TESTING OF IC's CHIPS, SOCKETS, PORTS & SLOTS
- > SOLDERING & DESORDERING PRACTICE

# **DIGITAL ELECTRONICS:**

- Types of Number system, binary, octal, Hex, Conversion of Number Systems
- > Types of Gate: AND, NAND, OR, NOT & NOR etc.

- > DCIN SECTION OF DIFFERENT ARCHITECTURE BOARDS
- ➢ UNIVERSAL CONCEPT OF DCIN
- > WORKING CONCEPT OF CHARGING IC
- > UNIVERSAL CONCEPT OF CHARGING SECTION
- > ALL PIN FUNCTION OF CHARGING IC
- > CHARGING CONTROL SECTION
- ➢ CHARGING PROTECTION CIRCUIT

- > SIO & PROGRAMMING CONTROLL SECTION
- ➢ CHARGING ISSUE & SOLUTION
- > 3V 5V REGULATOR & PIN FUNCTION
- ➢ 3V 5V IC REQUREMENT
- ➢ GENERATING OF 15V, 28V, 12V

#### MODULE – 3

- ➢ SIO REQUIREMENT
- > PCH & SIO COMMUNICATION
- ➢ RTC SECTION
- ➤ GREEN CLOCK WITH POWER SEQUENCE & BLUE CLOCK
- ➢ BIOS & CLOCK
- ➢ CLOCK RELATED ISSUE
- ➤ STATES G1-S5-S4-S3-S0...
- > POWER RAILS OF DIFFERENT ARCHETECTURE
- ➢ RAM SECTION
- ► RAM PIN FUNCTION
- ➢ RAM PROTECTION CIRCUIT
- ➢ NO DISPLAY ISSUE

- > PCH REQUIREMENTS
- > PCH DATASHEET
- DIFFERENT PCH WELLS
- ➢ PCH SWITCHING
- ➢ SOC ARCHETECTURE
- CPU REQUIREMENT
- VRM IC REQUIREMENT
- VID VS SVID

- > CPU WITH RAM COMMUNICATION
- ► THERMAL SECTION & CPU FAN
- LVDS VS EDP
- ► USB, SATA, SOUND, LAN CONNECTOR
- KEYBOARD, TOUCHPAD

#### **MODULE-5**

- ► RAM WITH CPU COMMUNICATION
- > PCH WITH SOC COMMUNICATION
- ➢ 510N LOGIC
- ➢ SIO COMMUNICATION
- ➢ SIO PSL LOGIC
- ➢ VOLTAGE TESTING POINT
- ➢ NEW POWER UP SEQUENCE
- > PCH POWER MANAGEMENT
- ➢ GRAPHICS CONVERSION
- ➢ BIOS EDITING AND ME REGION CLEANING
- ➢ HOW TO USE BOARDVIEWS
- > TROUBLASHOOTING LAPTOP BOARDS

- > PCH POWER MANAGEMENT
- ➢ SIO & POWER SEQUENCE
- ➤ CRO BASIC FUNCTION SETTING
- ➢ CRO DRAMRST CHECKING
- > CRO DUAL CHANNEL DIFFERENTIAL TESTING
- > CRO DUTY CYCLE CONCEPT
- ➢ CRO PWM CHECKING
- ➢ CRO RTC TESTING

- > CRO SUSCLK & SMBUS TESTING
- ➢ THERMAL CRO DOUBTS
- ➢ ALL DOUBTS
- ➢ MIX SECTION DOUBTS

### **MODULE-7**

- CASE STUDIES MIX
- > NEW POWER SUPPLY
- > NEW POWERUP SEQUENCE
- > LIFETIME WORKING BIOS UP TO LATEST GEN.
- > SCHEMETIC LAPTOP, DESKTOP, APPLE-MAC
- BIOS PASSWORD TOOLS
- HDD PASSWORD TOOLS
- ➢ ME-CSME- CLEANING SOFTWARE
- ➢ BIOS EDITING TOOLS
- > DIS TO UMA CONVERSION
- ➢ FUTURE UPDATES FREE
- > MOTHERBOARD FAULT TRACING

- ➢ HOW TO USE BOARDVIEWS
- ➢ HOW TO USE OF DSO
- ➢ HOW TO USE OF POWER SUPPLY
- ▶ HOW TO TRACE SHORTING WITH THE HELP OF POWER SUPPY
- BIOS PROGRAMMING
- ➢ IO PROGRAMMING
- ➢ BOARD WASHING WITH WATER
- ➢ LAPTOP FABRICATION

- COMMON FAULTS
- ➢ HOW TO SOLVE MULTIPLE PROBLEMS
- > MAGICAL CASE STUDY

# We are Laptian

#### Observation Skills. Memory Skills. Problem Solving. Logical Thinking

We have experienced consultants, techno experts, problem solvers, tech researchers, tool experts. Our team highly motivated and educated professionals where our quality and keenness sets us aside from our competition.