



Syllabus: Certificate in Laptop Repairing (Basic)

- **Duration:** 3 Months
- **Eligibility:** 10th Pass

Evaluation Scheme

- **Full Marks:** 200
- **Theory Paper:** 100 Marks
- **Practical/Project Works:** 80 Marks
- **Internal Assessment/Viva voce:** 20 Marks

Course Syllabus

This program offers hands-on training in laptop hardware architecture, basic electronic component testing, disassembly/reassembly, and foundational troubleshooting techniques.

Module 1: Laptop Architecture & Tools

- Introduction to Laptop Parts: Display panels, Keyboards, Touchpads, and Hinges.
- Internal Components: Motherboard layout, Processor types, RAM slots, and Storage (HDD/SSD).
- Repair Tools: Proper use of Precision Screwdriver sets, Spudgers, Tweezers, and Anti-static mats.

Module 2: Basic Electronics & Component Testing

- Fundamentals of Electronics: Understanding Voltage, Current, and Resistance.
- Using a Multimeter: Testing Laptop Adapters, Batteries, and Power DC Jacks.
- Introduction to SMD components: Identifying Capacitors, Resistors, and Diodes on the motherboard.

Module 3: Disassembly, Cleaning & Reassembly

- Step-by-step Disassembly: Safe removal of covers, batteries, and delicate ribbon cables.
- Thermal Management: Cleaning cooling fans and applying fresh thermal paste to CPUs/GPUs.

- Display Servicing: Basic screen replacement and checking LVDS cable connections.

Module 4: Hardware Upgrades & Software Troubleshooting

- System Upgrades: Replacing RAM modules and upgrading from HDD to SSD.
- Software Support: OS Installation, BIOS/UEFI updates, and Driver management.
- Common Issues: Troubleshooting "No Power," "No Display," and "System Hanging" scenarios.

Module 5: Final Capstone Project (Laptop Service Lab)

- **Project Task:** Students will perform a full service on a faulty laptop.
- **Requirements:** Successfully disassemble the unit, identify a hardware fault, clean the internal thermal system, and reassemble it to a working state with a fresh OS.
- **Submission:** Presentation of a "Service Log Report" and functional testing during the Viva voce.

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