AXOMTECH
SKILL EDUCATION COUNCIL

Syllabus: Certificate in Computer Assembling & Troubleshooting

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

Evaluation Scheme

- **Full Marks:** 200
- **Theory:** 100 Marks
- **Practical/Project Works:** 80 Marks
- **Internal Assessment/Viva (Oral Test):** 20 Marks

Course Syllabus

This course provides hands-on, practical knowledge of computer hardware, enabling students to assemble a PC from scratch, install necessary software, and troubleshoot common hardware and software problems.

Module 1: PC Hardware Components

- Introduction to PC Architecture.
- Identifying and understanding the function of each component:
  - Motherboard, CPU, RAM, Hard Disk Drive (HDD), Solid State Drive (SSD).
  - Power Supply Unit (SMPS), Graphics Card, Sound Card, LAN Card.
  - Ports, Connectors, and Cables.

Module 2: PC Assembling

- Safety precautions and tools required for assembling.
- Step-by-step process of installing components onto the motherboard.
- Fitting the motherboard into the PC case.
- Proper cable management and connections.
- Post-assembly checks and first boot.

Module 3: BIOS & Software Installation

- Understanding BIOS/UEFI settings and configuration.
- Creating bootable media (USB/DVD).
- Partitioning and formatting hard drives.
- Installing an Operating System (e.g., Windows).
- Installing essential drivers (Motherboard, Graphics, Sound, etc.).
- Installing basic utility software.

Module 4: Troubleshooting & Maintenance

- Identifying problems using beep codes and POST errors.
- Troubleshooting common hardware issues (e.g., PC not starting, display problems, overheating).
- Troubleshooting common software issues (e.g., slow performance, driver conflicts, virus/malware problems).
- Preventive maintenance techniques.

Module 5: Final Project

- Students will be given components to assemble a complete, working PC.
- **Example Project:** Assemble a PC from scratch, configure its BIOS, install the operating system and all necessary drivers, and demonstrate that it is fully functional. Alternatively, diagnose and repair a faulty computer system.