

CHM-O level
H2: PC Architecture

50 Hours

Course Prerequisites:

Basic knowledge of Digital Electronics , Number Systems (Decimal, Binary, Octal, Hexa).

Learning outcome of the Course

Able to diagnose the problem Desktop /Laptop /Mobile/ Note pad etc. and repair

Course details

Section	Brief Contents	Duration
Introduction to Microprocessor	Evolution of Microprocessor, architecture of Microprocessor	6
Arm Processors	ARM Programmer's Model – Registers – Processor Modes – State of the processor – Condition Flags – ARM Pipelines – Exception Vector Table – ARM Processor Families – Introduction to ARM Memory Management Unit ARM Addressing Modes – ARM Instruction Set Overview – Thumb Instruction Set Overview – LPC210X ARM Processor Features	12
Troubleshooting & General PC Problems	Introduction, General Troubleshooting rules, Preventive Maintenance. Typical Motherboard BIOS, BIOS Features, BIOS & Boot Sequences, BIOS Shortcoming & Compatible Issues, BIOS Troubleshooting, BIOS Upgrades. POST, Error Code: Beep Code, Post Code, Post Reader Card Basic Memory Concepts: Introduction, Installing Memories, Upgrade Options & Strategies Printers: Printer Technology, How Printer Works, Attaching Printer, Installing Network Printer Drivers, Common Printer Problems & Solution	12
Practical's	Practical-1. Study of different types of motherboards.	1
	Practical-2. Study of jumper settings on Pentium mother boards.	1
	Practical-3. Installation of memory modules.	1
	Practical-4. Study of Various adapter cards and their functioning and installation	1
	Practical-5. Study of different buses and the number of pins in the different slots corresponding to different buses.	1
	Practical-6. Opening the PC and identification and study of its different blocks, assembling and disassembling.	1
	Practical-7. Study of various types of display Graphic cards	1
	Practical-8. Assembly and disassembly of different Desktop /Laptop /Mobile/ Note pad etc.	1
	Practical-9. Identification of all chips and crystals on laptop and desktop motherboard	1
	Practical-10. Installation of DVD/USB..	1
	Practical-11. Study of faults diagnosis based on different beeps.	1

Section	Brief Contents	Duration
	Practical-12. Configure CMOS, BIOS setup.	1
	Practical-13. Installation of hard disk, Partitioning.	1
	Practical-14. Installation of hard disk in master and slave mode.	1
	Practical-15. How to access the configured space of ISA slot.	1
	Practical-16. Study of Desktop /Laptop /Mobile/ Note pad etc specification	1
	Practical-17. Study of preventive maintenance of latest gazettes .	1
	Practical-18. Examining various error codes and their causes	1
	Practical-19. Study of various Operating systems	1
	Practical-20. Replacing Mobile Processor, FPC belts, DVI cables, switches, speakers, web cams, ventilation fans, Bluetooth cards, WI-FI cards, WI-FI antenna cables of laptops	1