

<b>Devi Ahilya University, Indore, India Institute of Engineering &amp; Technology</b>				<b>II Year B.E.(Information Technology) (Full Time)</b>			
<b>Subject Code &amp; Name</b>	<b>Instructions Hours per Week</b>			<b>Credits</b>			
<b>ITR3L1</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>L</b>	<b>T</b>	<b>P</b>	<b>Total</b>
<b>Computer Hardware Lab</b>	<b>0</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>1</b>

### **Learning Objectives:**

1. To provide the knowledge of computer Hardware parts and latest technology.
2. To give basic Knowledge of working internal part of system.
3. To develop skill to analyze and find the fault in System.
4. To know how to assembling the hardware parts.

**Pre requisites :** Not Required.

## **COURSE CONTENTS**

### **UNIT-I**

#### **CPC Processor**

Basics of Processor and Computer Generation, Study of Different Processor, Pentium, Dual Core , Quad Core , I3, I5, I7 Processor, Motherboards, Chipset and Controllers, BIOS and the Boot Process.

### **UNIT-II**

#### **Internal Components**

IDE and SATA Devices: Hard Disk Drive and CD/DVDs Drives, SCSI Devices, Floppy Disk, Zip Drive, Backup Drive, Expansion Cards- LAN Card, IDE Card , VGA and SVGA Cards, Sound Card, Interface Cards, I/O cards, Video Cards, USB Card, Internal Ports, Cables and Connector Types, SMPS.

### **UNIT-III**

#### **Computer Peripherals**

Monitors:- CRT, LCD and LED Displays, Printers:- Dot-Matrix Printer, Inkjet Printer, Laser Printer  
Scanner:- Photo Scanner, Documents Scanner, Bar Cord Scanner, Keyboards, Mouse, External Modem, Ports and Connectors, Batteries, Pen Drives, SCSI interface devices, Laptop Computers, Digital Advance storage technology.

### **UNIT-IV**

#### **Memory and Networking Devices**

Computer memory: Primary Memory- RAM, ROM, Secondary memory, Switches, Routers, Modems.

### **UNIT-V**

#### **Assembling and Operating System Installation**

Assembled the Hardware Parts, Different types of Operating systems, System files FAT and NTFS, Dos , Windows XP, Windows Vista, Windows 7 and Windows 8 and Red Hat Linux and Multi Boot Operating System and latest OS.

## **Learning Outcomes:**

Upon Completing the Course, Student will able to: learn the knowledge of hardware parts and Assemble a computer System and Installation & Uninstallation of Software.

## **BOOKS RECOMMENDED:**

- [1] PC AND CLONES Hardware, Troubleshooting and Maintenance B. Govinda rajalu, Tata Mc-graw-Hill Publication
- (2) PC Troubleshooting and Repair Stephen J. Bigelow Dream tech Press, New Delhi.
- [3] Windows XP Professional and Windows 7 Edition By BPB Publication.
- (4) Red Hat Linux By BPB & SYBEX publication.

## **List of Practical Assignment:**

1. To study motherboard.
2. Study of Processor.
3. To study SMPS and UPS.
4. To study the CD-ROM and DVD-ROM.
5. To study working of keyboard and mouse.
6. To study different ports and slots.
7. To study various types of Cables &Connectors.
8. Study of monitor.
9. To study different types of printers.
10. To Run All Dos Command (Internal and External Dos Command)
11. To study Floppy Disk Drive.
12. Installation of different Operating Systems
13. Installation of different device drivers
14. Installation of different Application Software
15. Assembling and Disassembling of a Computer System.

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