

## Hardware Course Syllabus

<b>Days</b>	<b>Topic</b>	<b>Options covered</b>	<b>Hours</b>
Day 1	Computer concepts And Introduction	<ul style="list-style-type: none"> <li>• History of computer</li> </ul>	1
Day 2	Generations of computers	<ul style="list-style-type: none"> <li>• 1<sup>st</sup>,2<sup>nd</sup>,3<sup>rd</sup>,4<sup>th</sup>,5<sup>th</sup> Generation its components</li> </ul>	1
Day 3	Types Of Computers And Devices	<ul style="list-style-type: none"> <li>• Microcomputers, Mini computers, Super computers, Mainframe computers</li> </ul>	1
Day 4	Block diagram of CPU Input & Output devices	<ul style="list-style-type: none"> <li>• Memory concept</li> <li>• Primary memory                             <ul style="list-style-type: none"> <li>○ Ram and Rom</li> </ul> </li> <li>• Secondary memory                             <ul style="list-style-type: none"> <li>○ Hard Disk</li> </ul> </li> </ul>	1
Day 5	IMPLIMENTATION of Hardware and Software	<ul style="list-style-type: none"> <li>• Hardware components                             <ul style="list-style-type: none"> <li>○ Topics in h/w</li> </ul> </li> <li>• Sections of H/W</li> <li>• Types of software's                             <ul style="list-style-type: none"> <li>○ DOS,WINDOWS,UNIX,LINUX/WI N-NT</li> </ul> </li> </ul>	1
Day 6	Types of SOFT WARE	<ul style="list-style-type: none"> <li>• APPLICTION SOFT WARE</li> <li>• PACKAGE</li> </ul>	1
Day 7	Introduction of system Components	<ul style="list-style-type: none"> <li>• CPU (Processor)</li> <li>• RAM</li> <li>• Motherboard</li> <li>• Cabinet</li> </ul>	1
Day 8	Introduction of system Components	<ul style="list-style-type: none"> <li>• SMPS</li> <li>• Floppy Drive</li> <li>• Hard Disk</li> <li>• CD and DVD Drives</li> </ul>	1
Day 9	Introduction of system Connectors	<ul style="list-style-type: none"> <li>• DIN Connectors</li> <li>• RJ Connectors</li> <li>• BNC Connectors</li> <li>• Audio Connectors</li> </ul>	1
Day 10	Introduction of system	<ul style="list-style-type: none"> <li>• USB Connectors</li> </ul>	1

<b>Days</b>	<b>Topic</b>	<b>Options covered</b>	<b>Hours</b>
	Connectors	<ul style="list-style-type: none"> <li>• FireWire Connectors</li> <li>• Video Cards</li> <li>• Network Cards</li> </ul>	1
Day 11	Introduction of system Connectors	<ul style="list-style-type: none"> <li>• Keyboard and Mouse</li> <li>• Serial Ports and parallel Ports and Joystick</li> <li>• Internet Modem</li> <li>• Printer Ports</li> </ul>	1
Day 12	Motherboards Introduction	<ul style="list-style-type: none"> <li>• Designing of Main Board</li> <li>• Single Board based approach and Back Planes Approach</li> <li>• Block- Diagram of Motherboard</li> <li>• Main Components of Motherboard</li> </ul>	1
Day 13	Motherboards	<ul style="list-style-type: none"> <li>• Introduced ISA Slots</li> <li>• Introduced PCI Slots</li> <li>• Introduced AGP Slots</li> </ul>	1
Day 14	Explain RAM'S with Diagram Explain IDE & EIDE Connector with Diagram Analog Audio Input Connector	<ul style="list-style-type: none"> <li>• Introduced RAM'S Slots</li> <li>• Introduced IDE &amp; EDIE &amp; SATA Connector</li> <li>• Introduced Audio Port types</li> </ul>	1
Day 15	Front Panel Connections I/O Ports	<ul style="list-style-type: none"> <li>• Front Panel Diagram with explanation</li> <li>• Onboard input and output ports</li> </ul>	1
Day 16	Motherboard Power Supply types Explain Chipset types	<ul style="list-style-type: none"> <li>• SMPS Power Connectors Diagram and types</li> <li>• Northbridge</li> <li>• Southbridge</li> </ul>	1
Day 17	BIOS ZIF Socket CPU Fan Connector Back panels Style System Introduction	<ul style="list-style-type: none"> <li>• Basic Input/output System brief explanation</li> <li>• Old Processor socket brief explanation</li> <li>• Old Motherboard connection explanation</li> </ul>	1

<b>Days</b>	<b>Topic</b>	<b>Options covered</b>	<b>Hours</b>
Day 18	Motherboard Form Factor XT,AT,BABY-AT,ATX, MICRO-ATX,NPX, NLX, BTX	<ul style="list-style-type: none"> <li>• XT, AT, BABY-AT, ATX</li> <li>• Motherboard's explanation+</li> </ul>	1
Day 19	Motherboard Form Factor	<ul style="list-style-type: none"> <li>• MICRO-ATX, NPX, NLX, BTX</li> <li>• Motherboard's explanation</li> </ul>	1
Day 20	Main types of motherboards	<ul style="list-style-type: none"> <li>• Introducing new types of system architectures</li> <li>• Layout of an AT-motherboard</li> <li>• Layout of Baby AT-motherboard -1</li> <li>• Layout of a late Baby AT-motherboard - 2</li> <li>• Layout of an LPX-motherboard</li> </ul>	1
Day 21	Main types of motherboards	<ul style="list-style-type: none"> <li>• Layout principles of an ATX case</li> <li>• Layout principles of an ATX case</li> <li>• Placement of the mounting holes on the AT, Baby AT, and ATX motherboards</li> </ul>	1
Day 22	Main types of ATX motherboards	<ul style="list-style-type: none"> <li>• Layout of a late PCI-based ATX-motherboard</li> <li>• Layout of port based ATX-motherboard</li> <li>• Layout of a serial-port based ATX-motherboard P-4</li> <li>• Layout of a micro BTX-motherboard</li> </ul>	1
Day 23	Identifying The Motherboards Motherboard Technology	<ul style="list-style-type: none"> <li>• Original Motherboard</li> <li>• Chipset Motherboard</li> <li>• China Motherboard</li> <li>• IBM, INTEL.AMD M.Boards</li> </ul>	1
Day 24	Deferent types of Buses Architecture	<ul style="list-style-type: none"> <li>• Memory Bus</li> <li>• AGP</li> <li>• PCI</li> <li>• MCA</li> <li>• EISA</li> <li>• 8-bit ISA and 16-bit ISA</li> </ul>	1

<b>Days</b>	<b>Topic</b>	<b>Options covered</b>	<b>Hours</b>
		<ul style="list-style-type: none"> <li>• Fire Wire</li> <li>• USB</li> </ul>	
Day 25	Deferent types of RAM'S models	<ul style="list-style-type: none"> <li>• All types of Ram Diagram's and support motherboards models</li> </ul>	1
Day 26	Difference between "D" ram & "S" ram	<ul style="list-style-type: none"> <li>• Static RAM Technologies</li> <li>• Dynamic RAM Technologies</li> </ul>	1
Day 27	How to Installing the ram in computer Ram capacity types Memory technology Description	<ul style="list-style-type: none"> <li>• Ram connection in motherboard in deferent types</li> <li>• All Ram capacity and speeds</li> <li>• Explain ram all technology</li> </ul>	1
Day 28	Storage Devices	<ul style="list-style-type: none"> <li>• Hard drives, floppy drives, tape drives deferens</li> <li>• Hard drives impartments and types of HDD models</li> <li>• Tracks and Sectors</li> </ul>	1
Day 29	Hard disk parts HDD types HDD back up format	<ul style="list-style-type: none"> <li>• HDD parts in side view practical</li> <li>• HDD interfaces and IDE,SATA,SCSI Connectors types</li> <li>• Data back up from HDD to HDD and HDD board replacement</li> </ul>	1
Day 30	Introduction of Processors	<ul style="list-style-type: none"> <li>• Processor sockets types explain</li> <li>• INTEL and AMD Processor types explain</li> </ul>	1
<b>Days</b>	<b>Topic</b>	<b>Options covered</b>	<b>Hours</b>
Day 31	Intel Processors explain AMD Processors explain	<ul style="list-style-type: none"> <li>• Intel all models explain (Celeron to I7)</li> <li>• AMD all models explain (A4 Series to Sempron Series)</li> </ul>	1
Day 32	About S.M.P.S types of S.M.P.S	<ul style="list-style-type: none"> <li>• All S.M.P.S types and S.M.P.S power connection models</li> </ul>	1
Day 33	Explanation of voltages in S.M.P.S and its working	<ul style="list-style-type: none"> <li>• S.M.P.S Power testing</li> <li>• S.M.P.S power cables all wires power capacity</li> </ul>	1
Day 34	BIOS & introduction	<ul style="list-style-type: none"> <li>• POST working</li> <li>• User Interface</li> </ul>	1

<b>Days</b>	<b>Topic</b>	<b>Options covered</b>	<b>Hours</b>
		<ul style="list-style-type: none"> <li>• Boot Sequence</li> <li>• BIOS TERMS Explanation</li> </ul>	
Day 35	BIOS POST Error Codes deferent types	<ul style="list-style-type: none"> <li>• IBM POST</li> <li>• AMI BIOS (American Megatrends)</li> <li>• AWARD BIOS</li> <li>• Phoenix BIOS</li> </ul>	1
Day 36	Standard C.M.O.S features	<ul style="list-style-type: none"> <li>• Mercury board models</li> </ul>	1
Day 37	Advanced BIOS features	<ul style="list-style-type: none"> <li>• Intel board models : 846,865,945</li> </ul>	1
Day 38	Advanced BIOS features	<ul style="list-style-type: none"> <li>• Intel board models : 945GCCR,DG31,BF/BR41</li> </ul>	1
Day 39	PC Assembly Introduction	<ul style="list-style-type: none"> <li>• Installing the motherboard</li> <li>• Installing the CPU</li> <li>• Installing the heat sink</li> <li>• Installing the RAM</li> <li>• Installing the power supply</li> <li>• Installing the video card</li> <li>• Installing optical drive</li> <li>• Connecting various cables</li> </ul>	1
Day 40	Assembling & dismantling	<ul style="list-style-type: none"> <li>• Intel P-II system</li> </ul>	1
Day 41	Assembling & dismantling	<ul style="list-style-type: none"> <li>• Mercury P-IV</li> <li>• Intel new models</li> </ul>	1
Day 42	Introduction of New C.M.O.S settings	<ul style="list-style-type: none"> <li>• Old &amp; New C.M.O.S settings difference</li> </ul>	1
Day 43	Old C.M.O.S settings 846,865	<ul style="list-style-type: none"> <li>• Mercury Boards</li> </ul>	1
Day 44	New C.M.O.S settings (Intel 945,31,41 Models )	<ul style="list-style-type: none"> <li>• Intel Boards</li> </ul>	1
Day 38	Advanced options	<ul style="list-style-type: none"> <li>• Creating &amp; deleting the user password</li> <li>• Boot settings and save options</li> <li>• Onboard components activate and deactivate</li> </ul>	1
Day 40	Introduction of DOS	<ul style="list-style-type: none"> <li>• History of dos</li> <li>• Dos version</li> </ul>	1

<b>Days</b>	<b>Topic</b>	<b>Options covered</b>	<b>Hours</b>
		<ul style="list-style-type: none"> <li>Floppy using of dos (A,B Drives)</li> </ul>	
Day 41 - 45	DOS Internal commands	<ul style="list-style-type: none"> <li>Cls, Date, Time, Vol, Ver, Verify, Prompt, Dir, Md, Cd, Copy Con, Edit, Del, Ren, Copy,</li> <li>Batch Files Creation (Ordinary batch file, autoexec batch file, Echo, Pause , Goto )</li> </ul>	1
Day 46 - 49	DOS External commands	<ul style="list-style-type: none"> <li>Label, More, Find, Tree, Move, Attrib, Xcopy, Doskey, Chkdsk, Format.</li> </ul>	1
Day 50	System format {D.M} Disk management	<ul style="list-style-type: none"> <li>System create default 4 partisans</li> </ul>	1
Day 51	System format {D.M} Disk management	<ul style="list-style-type: none"> <li>User create recued partisans</li> </ul>	1
Day 52	System format {D.M}	<ul style="list-style-type: none"> <li>Single Partisans</li> </ul>	1
Day 53	FAT, FAT32 vs NTFS	<ul style="list-style-type: none"> <li>Partisans File system types</li> <li>Advantages and disadvantages</li> </ul>	1
Day 54	O.S (Operating system)	<ul style="list-style-type: none"> <li>XP2 installation</li> </ul>	1
Day 55	O.S (Operating system)	<ul style="list-style-type: none"> <li>XP3 installation</li> </ul>	1
Day 56	O.S (Operating system)	<ul style="list-style-type: none"> <li>XP MCE installation</li> </ul>	1
Day 57	O.S (Operating system)	<ul style="list-style-type: none"> <li>VISTA installation</li> </ul>	1
Day 58	O.S (Operating system)	<ul style="list-style-type: none"> <li>WINDOWS - 7 all version installation</li> </ul>	1
Day 59	O.S (Operating system)	<ul style="list-style-type: none"> <li>WINDOWS – 8, 8.1 installation</li> </ul>	1
Day 60	O.S (Operating system)	<ul style="list-style-type: none"> <li>Windows – 10 installation</li> </ul>	1
Day 61	O.S (Operating system)	<ul style="list-style-type: none"> <li>XP,VISTA repair</li> </ul>	1
Day 62	O.S (Operating system)	<ul style="list-style-type: none"> <li>WINDOWS - 7, 8, 8.1 repair</li> </ul>	1
Day 63	WINDOWS – server Os	<ul style="list-style-type: none"> <li>2008 server installation</li> </ul>	1
Day 64	WINDOWS – Server Os	<ul style="list-style-type: none"> <li>2012 server installation</li> </ul>	1
Day 65	Password Backing	<ul style="list-style-type: none"> <li>all Operating Systems user accounts password unlock</li> </ul>	1
Day 66	Installation of General Software's	<ul style="list-style-type: none"> <li>Adobe reader, WinRAR, players</li> <li>Antivirus software's download and install</li> </ul>	1
Day 67	Installation of M.S office	<ul style="list-style-type: none"> <li>2007 &amp; 2010 &amp; 2013 versions</li> </ul>	1

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		<ul style="list-style-type: none"> <li>• installation</li> </ul>	
Day 68	Installation of DTP ALL Software's AND ACCOUNTS	<ul style="list-style-type: none"> <li>• Adobe Photoshop -2014, Pagemaker-7.0,</li> <li>• CorelDraw-X6, Anu script 6.0,70, Tally ERP, Wings,Ex-Next generation, Focus</li> </ul>	<ul style="list-style-type: none"> <li>• 1</li> </ul>
Day 69	Using Image File OS Writing on CD, DVD, PENDRIVE	<ul style="list-style-type: none"> <li>• Nero Software installation and CD, DVD Writing</li> <li>• Windows Setup write on USB OS</li> </ul>	<ul style="list-style-type: none"> <li>• 1</li> </ul>
Day 70	Installation of (Adobe CS Kit)	<ul style="list-style-type: none"> <li>• Adobe CS 3.0, Adobe CS 5.0, Adobe CS 6.0,</li> </ul>	<ul style="list-style-type: none"> <li>• 1</li> </ul>
Day 71	Installation of multimedia software	<ul style="list-style-type: none"> <li>• 3DS MAX Software Installation and activation</li> </ul>	<ul style="list-style-type: none"> <li>• 1</li> </ul>
Day 72	Installation of multimedia software	<ul style="list-style-type: none"> <li>• MAYA S.W Installation and activation</li> </ul>	<ul style="list-style-type: none"> <li>• 1</li> </ul>
Day 73	Installation of Java Software's	<ul style="list-style-type: none"> <li>• Java-8.0, Tomcat8.0, Net Benes, My-SQL, SQL Front</li> </ul>	<ul style="list-style-type: none"> <li>• 1</li> </ul>
Day 74	Installation of Auto –Cad	<ul style="list-style-type: none"> <li>• Auto-Cad Software Installation and activation</li> </ul>	<ul style="list-style-type: none"> <li>• 1</li> </ul>
Day 75	Installation of .NET	<ul style="list-style-type: none"> <li>• .Net-2010 Installation and registration</li> </ul>	1
Day 76	Installation of SQL server	<ul style="list-style-type: none"> <li>• SQL Server 2008 R2 Installation</li> </ul>	1
Day 77	Installation of oracle	<ul style="list-style-type: none"> <li>• Oracle 8i, 10g, 11g Installation</li> </ul>	1
Day 80	Installation of Testing Tools	<ul style="list-style-type: none"> <li>• Win runner, Load runner Installation and activation</li> </ul>	1
Day 81	Installation of Testing Tools	<ul style="list-style-type: none"> <li>• QTP,QC Installation and activation</li> </ul>	1
Day 82	Installation of drivers	<ul style="list-style-type: none"> <li>• Using company CD/DVD</li> </ul>	1
Day 83	Installation of drivers	<ul style="list-style-type: none"> <li>• Using Best Drivers, Driver Pack</li> </ul>	1
Day 85	Trouble Shooting of mother board Trouble Shooting of Processor	<ul style="list-style-type: none"> <li>• Mother board and processor problem identification</li> <li>• And problem recertification</li> </ul>	1
Day 86	TROUBLE SHOOT of Rams	<ul style="list-style-type: none"> <li>• RAM, SMPS problem identification And problem</li> </ul>	1

<b>Days</b>	<b>Topic</b>	<b>Options covered</b>	<b>Hours</b>
	TROUBLE SHOOT of S.M.P.S	recertification	
Day 87	TROUBLE SHOOT HDD TROUBLE SHOOT of Software	<ul style="list-style-type: none"> <li>• Hard Disk problem identification And problem recertification</li> </ul>	1
Day 88	TROUBLE SHOOT of C.M.O.S Deleting the C.M.O.S password	<ul style="list-style-type: none"> <li>• CMOS and BIOS settings</li> <li>• CMOS Password braking</li> </ul>	1
Day 89	Software's Download	<ul style="list-style-type: none"> <li>• All Software's Download for deferent WEB Sites</li> </ul>	1
Day 90	Teem viewer	<ul style="list-style-type: none"> <li>• Teem viewer using</li> </ul>	1