

**PNS School of Engg. & Tech, Marshaghai, Kendrapara**

<b>Discipline:</b> Computer Science		<b>Semester: 5th</b>	<b>Name of the faculty:</b> Jayashree Bishoi
<b>Subject:</b> COMPUTER HARDWARE & MAINTENANCE		<b>No. of Days/week: 04</b>	<b>Start Date:</b> 07/07/2025
			<b>End Date:</b> 15/11/2025
<b>Week</b>	<b>Class Day</b>	<b>Theory Topics</b>	
1st	1st	<b>1.COMPUTER CENTRE MANAGEMENT (Introduction)</b>	
	2nd	Need of Management in Computer Centre	
	3rd	Types of Jobs carried out in computers in an organization	
	4th	Duties and responsibilities of personnel involved	
2nd	1st	Need of Training of Staff	
	2nd	Idea about Various makes of Computers	
	3rd	Various makes of Computers Continued	
	4th	Question Answer Discussion	
3rd	1st	<b>2.SITE PREPARATION &amp; INSTALLATION (Introduction)</b>	
	2nd	Layouts of computer centre	
	3rd	False Roofing, Air Conditioning, Dust Proofing	
	4th	Power Conditioning equipments like CVT	
4th	1st	Power Conditioning equipments like UPS	
	2nd	Types of UPS and its functionality	
	3rd	Isolation Circuits with Principles of functioning	
	4th	Exam related Question Answer Discussion	
5th	1st	<b>3.MOTHER BOARD and COMPONENTS (Introduction)</b>	
	2nd	Components and slots (Processor socket/slot, memory sockets)	
	3rd	Discussion about Chip sets, Cache, BIOS	
	4th	Discussion about Clock Generator, RTC, I/O Controller	
6th	1st	Key Board/Mouse Connectors, Jumpers, Pin Connectors etc)	
	2nd	Mother Board architecture and Block Diagram	
	3rd	Processors (Core2 Duo Processor, Quad Core Processor)	
	4th	Core i3,i5,i7 series, AMD A10 series, Xeon Processor	
	1st	Chip Sets	

7th	2nd	Bus Standards: PCI, AGP, USB etc.
	3rd	Colour Codes for Devices/ports
	4th	Doubt clearing class
8th	1st	<b>4.MEMORY AND I/O DEVICES (Introduction)</b>
	2nd	Primary and secondary Memory
	3rd	Memory speed , Access time
	4th	Hard Disk, Construction, Working Principles
9th	1st	File System, Formatting, Partitioning
	2nd	Removable Storage and Special devices and
	3rd	Working principles of Removable Storage and Special devices
	4th	Working principle of(CD, DVD, External drives, Memory stick, USB flash drive, Solid state drive)
10th	1st	Key Board(Interfacing, USB, Wireless, Types of keys, Keyboard Matrix, Key Bouncing)
	2nd	Printers(Types, operation and Trouble shooting)
	3rd	Scanners(Types, operation and Trouble Shooting)
	4th	<b>5.DISPLAY , POWER SUPPLY AND BIOS (Introduction)</b>
11th	1st	Displays and Graphics Cards
	2nd	LCD,PLASMA,TFT,LED Displays
	3rd	SMPS (Basic Principles and operations, O/P voltage)
	4th	BIOS( Functions, setups, types of BIOS)POST(Operation, Faults related to Hardware)
12th	1st	<b>6. MAINTENANCE AND TROUBLE SHOOTING (Introduction)</b>
	2nd	Assembly of Components of Desktop Computers
	3rd	Configuring Laptops and Power settings
	4th	Laptop Components(Adapter , Battery, Basic problems, RAM types)
	1st	CPU types, Laptop Motherboard, block diagram, Laptop Keyboard

13th	2nd	Formatting , Partitioning and installation of OS,Trouble shooting of Commonly faced problems in Desktops and Laptops
	3rd	Basic Maintenance concepts(Preventive, Corrective, online),Diagnostic programs and tools
	4th	Methods of Trouble shooting, symptom observation, analysis, diagnosis, Correction
14th	1st	Upgradation of system and application software
	2nd	Virus concepts, Antivirus
	3rd	<b>7.NETWORKING DEVICES AND THEIR INTERFACES(Introduction)</b>
	4th	Network Interface card
15th	1st	Networking interconnecting devices such as hub, switch, Router
	2nd	Types of Network cable
	3rd	Types of Network connector
	4th	Previous year Question Discussion

*Biswanayan Swain*

**SIGNATURE OF H.O.D**

*Jayashree Bishoi*

**SIGNATURE OF LECTURER**