



GANAPATI INSTITUTE OF ENGINEERING AND TECHNOLOGY(POLYTECHNIC)
Mathasahi, Jagatpur, Cuttack - 754200

DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING
LESSONPLAN

Discipline: Computer Science&Engineering	Semester:5 th Winter/2025	Name of the Teaching Faculty: Mr.SMRUTIRANAN PATTHAIK
Subject:Computer Hardware and Maintenance, Theory-01	No.Of Days/Week:04	Start Date:14.07.2025 End Date:15.11.2025

Week	ClassDay	TheoryTopics
1st	1st	Unit-1:ComputerCentreManagement NeedofManagementinComputer Centre
	2nd	TypesofJobscarriedoutincomputers inanorganization Dutiesandresponsibilitiesofpersonnelinvolved
	3rd	TypesofJobscarriedoutincomputers inanorganization Dutiesandresponsibilitiesofpersonnelinvolved
	4th	NeedofTrainingofStaff IdeaaaboutVariousmakesofComputers.
2nd	1st	Unit-2:SitePreparation&Installation Layoutofcomputercenter
	2nd	FalseRoofing,AirConditioning,Dust Proofing
	3rd	PowerConditioningequipmentlikeCVT,UPS, IsolationCircuits with Principles of functioning
	4th	PowerConditioningequipmentlikeCVT,UPS, Isolation CircuitswithPrinciplesoffunctioning
3rd	1st	Unit-3:MotherBoardandComponents Componentsandslots(Processorsocket/slot, memorysockets, Chip sets, Cache Memory
	2nd	BIOS,ClockGenerator,RTC,I/OController,power Connector, Keyboard/Mouse Connectors, Jumpers, Pin Connectoretc.)
	3rd	Componentsandslots
	4th	Componentsandslots
4th	1st	Mother architectureandBlockDiagram
	2nd	Processors (Core2 Duo Processor, Quad Core Processor,Corei3,i5,i7series,AMDA10series, XeonProcessor)
	3rd	Processors (Core2 Duo Processor, Quad Core Processor,Corei3,i5,i7series,AMDA10series, Xeon Processor)
	4th	Processors (Core2 Duo Processor, Quad Core Processor,Corei3,i5,i7series,AMDA10series, Xeon Processor)
5th	1st	ChipSets
	2nd	ChipSets

	4th	BusStandards:PCI,AGP,USBetc.
6th	1st	ColorCodesforDevices/ports
	2nd	QuizTest
	3rd	Unit-4;MemoryAndI/ODevices PrimaryandsecondaryMemory
	4th	PrimaryandsecondaryMemory
7th	1st	Memoryspeed,Accesstime
	2nd	HardDisk,Construction,WorkingPrinciples
	3rd	HardDisk,Construction,WorkingPrinciples
	4th	FileSystem,Formatting,Partitioning
8th	1st	RemovableStorageand Special devices and their working principles(CD,DVD,Externaldrives,Memorystick,USB flash drive. Solid state drive)
	2nd	RemovableStorageand Special devices and their working principles(CD,DVD,Externaldrives,Memorystick,USB flashdrive,Solidstatedrive)
	3rd	RemovableStorageand Special devices and their working principles(CD,DVD,Externaldrives,Memorystick,USB flashdrive,Solidstatedrive)
	4th	Keyboard(Interfacing,USB,Wireless,Typesofkeys, Keyboard Matrix, Key Bouncing) MouseInterfacing
9th	1st	Printers(Types,operationandTroubleshooting)
		Printers(Types,operation,andTroubleshooting)
	2nd	Scanners(Types,operationandTroubleShooting)
		Unit-5:Display,PowerSupplyandBios DisplaysandGraphics Cards
	3rd	LCD,PLASMA,TFT,LEDDisplays
	4th	SMPS(BasicPrinciplesandoperations,O/Pvoltage)
10th	1st	BIOS(Functions,setup,typesofBIOS)
	2nd	POST(Operation,FaultsrelatedtoHardware)
	3rd	Unit-6:MaintenanceandTroubleShooting AssemblyofComponentsofDesktopComputers
	4th	ConfiguringLaptopsandPower settings
11th	1st	LaptopComponents(Adapter,Battery,Basicproblems, RAM types, CPU types, Laptop Motherboard, block diagram,LaptopKeyboard)
	2nd	LaptopComponents
	3rd	Formatting,PartitioningandinstallationofOS
	4th	TroubleshootingofCommonlyfacedproblemsinDesktops andLaptops
12th	1st	BasicMaintenanceconcepts(Preventive,Corrective, online) Diagnosticprogramsand tools
	2nd	MethodsofTroubleshooting(symptomobservation, analysis,diagnosis,Correction)

	3rd	Upgradation of system and application software Virus concepts, Antivirus
	4th	Unit-7: Networking Devices and Their Interfaces Network Interface card Networking interconnecting devices such as hub, switch, Router
13th	1st	Networking interconnecting devices such as hub, switch, Router
	2nd	Types of Network cable
	3rd	Types of Network connector
	4th	NIC/BRIDGE, ROUTER
14th	1st	Twisted pair cable, STP, UTP
	2nd	Structure of Coaxial cable, Advantages & Disadvantages.
	3rd	Uses of Fiber optic cable.
	4th	Gateway, Brouter, Load Balancer, Firewall
15th	1st	Revision and Doubt Clear
	2nd	Revision and Doubt Clear
	3rd	Discussion of Question Answer
	4th	Discussion of Question Answer

Sign of Faculty
S. P. Pathan
10.7.25

Sign of Sr. Lect.
S. P. Pathan
10.7.25
Dept. of Computer Science & Engg.

Sign of Principal
10/7/25
Principal
JNET (Polytechnic)
Jagatpur, Cuttack