Government Girls Polytechnic Bilaspur
Department of Computer Science & Engineering

LESSON PLAN
SESSION: Jan-June 2026

Subject: Computer Troubleshooting and Maintenance
Subject Code: 2022673(022)
Semester: VI
Name of the Subject Teacher: Mr Nuresh Kumar Dewangan

Unit	Topics/Subtopics to be covered	No. of periods planned
Unit-1 **Computer troubleshooting fundamentals**	1.1 Introduction, 1.1.1 Types of hardware faults - Static faults, Dynamic faults	1
	1.1.2 Classification of faults – Hardware faults, Software faults	1
	1.2 Symptoms of virus infection, 1.3 Types of viruses/software infections	1
	Revision – Unit 1	1
	Unit Test – 1	1
Unit-2 **Motherboards, Processors, and Memory**	2.1 Types and features of motherboard, 2.2 Chipsets, Ports, Buses and Expansion slots	1
	2.3 Motherboard Troubleshooting	1
	2.4 Processor – Features, Processor troubleshooting techniques	1
	2.5 BIOS – Functions, Booting process, 2.5.1 Beep Codes, Error messages, POST Faults	1
	2.6 Memory – Memory Modules, SIMMs, DIMMs, RIMMs, 2.6.1 Memory troubleshooting techniques	1
	Revision – Unit 2	1
	Quiz – 1	1
	Unit Test – 2	1
Unit-3 **Storage Devices**	3.1 Anatomy of a Hard Drive, 3.2 Hard Drive Interfaces: IDE, SCSI	1
	3.3 Solid-State Drives – SSD types, advantages, disadvantages, 3.3.1 SSD vs HDD	1
	3.4 Formatting, Partitioning and Installation of OS	1
	3.5 Optimizing Hard drive – Disk cleanup, Disk fragmentation, 3.5.1 Disk backup	1

	3.6 Preventive maintenance for Hard Drives. 3.7 Hard disk and USB drive troubleshooting and maintenance	1
	Revision – Unit 3	1
	Unit Test – 3	1
Unit-4 Display and power supply	4.1 Working principles of different display device. 4.1.1 LCD Principles	1
	4.1.2 TFT Displays. 4.1.3 OLED	1
	4.2 Graphic Cards – Video capture card. 4.3 Video Troubleshooting and Maintenance	1
	4.4 SMPS – Block diagram, Basic Principles and Operations	1
	4.4.1 O/P Voltages. Cable color codes and Connectors. 4.5 Power Supply Form Factors	1
	4.6 Power Supply Troubleshooting	1
	Revision – Unit 4	1
	Quiz – 2	1
	Unit Test – 4	1
Unit-5 Computer and network maintenance	5.1 Preventive measures to ensure a healthy system, 5.2 Best practices to be followed while working with a computer	1
	5.3 System Maintenance and fault prevention	1
	5.4 Steps to configure internet connection to the PC using wireless technology, 5.4.1 Troubleshoot various connection related problems	1
	5.5 Steps to configure internet connection using L2 and L3 switch, 5.6 Concept of VPN & proxy server	1
	Revision – Unit 5	1
	Quiz – 3	1
	Unit Test – 5	1
	FULL SYLLABUS REVISION	2
	Total Class	38