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FREE EBOOK

HARDWARE, NETWORKING AND REPAIR

Installing Windows and Fixing Common Problems

Install, update and repair Windows 10 and 11

INSIDE THIS BOOK

- Before you start: back up and check
- Making a bootable USB, and UEFI or legacy
- Installing Windows step by step
- Drivers, Device Manager and Windows Update
- ...and 7 more chapters, practice questions and a glossary

Beginner to intermediate

Hardware students, technicians and confident home users

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Installing Windows and Fixing Common Problems

Learn to back up a computer, make an official Windows USB installer and install Windows cleanly with the right drivers and updates. The book then shows how to speed up a slow PC, repair a computer that will not start, understand blue screens, fix network faults, remove malware and keep a proper job sheet for every repair.

WHO IT IS FOR	Hardware students, technicians and confident home users
LEVEL	Beginner to intermediate
SUBJECT AREA	Hardware, networking and repair
WHAT IS INSIDE	11 chapters, practice questions with answers, and a glossary

HOW TO USE IT

Read one chapter at a time and try the examples as you go: on a computer, at your workbench or in your notebook. The boxes give tips, safety points and short activities. When you finish, test yourself with the practice questions and check your answers at the end. Words you may not know are explained in the glossary.



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Before you start: back up and check

Installing or repairing Windows can erase everything on the drive. A good technician never touches a customer's computer until the important files are safe in a second place. This copy is called a **backup**.

What to back up

Ask the owner what matters to them, and then check these places yourself:

- The Desktop, Documents, Downloads, Pictures, Music and Videos folders.
- Other drives or partitions, such as D: or E:, if you will be changing them.
- Accounting data, such as the company folders of the shop's billing software.
- Email stored on the computer, for example in Outlook data files.
- Browser bookmarks. Saved passwords are safer synced to the owner's own account than copied to a pen drive.
- Licence keys for paid software, and any special printer or scanner software.

Where to back up

Method	Good for	Watch out for
External hard disk or SSD	Large amounts of data, quick to copy	Keep it safe; one drive is still only one copy
Pen drive	A few important folders	Easy to lose; small
OneDrive or another cloud service	Files you need everywhere	Needs internet; free space is limited
File History (built into Windows)	Regular automatic backups to an external drive	Must be switched on and the drive connected

REMEMBER

A backup is only real when you have checked it. Open a few files from the backup drive on another computer before you erase anything.

Check the computer and the Windows version

1. Press **Win+R**, type `msinfo32` and press Enter. Note the processor, the RAM, and the **BIOS Mode** line, which says UEFI or Legacy.
2. Open Settings, then System, About, to see the Windows edition (Home or Pro) and version.
3. Check that the hardware meets Windows 11's needs: a supported 64-bit processor, at least 4 GB of RAM, at least 64 GB of storage, UEFI firmware with Secure Boot capability, and TPM 2.0.

DID YOU KNOW

Microsoft ended regular support for Windows 10 in October 2025. Windows 10 still runs, but it no longer receives regular security updates, which makes it riskier to use online. Where the hardware allows, install or upgrade to Windows 11.

EXAMPLE

Meena runs a tailoring shop in Jaipur. Her old PC needs Windows reinstalled. Before starting, the technician copies her Desktop, her Documents folder and her billing software's data folder to an external drive, then opens three files on his laptop to check they work. Only then does he begin. It takes twenty minutes and saves Meena years of records.

CHAPTER 2

Making a bootable USB, and UEFI or legacy

To install Windows you start the computer from a USB pen drive that contains Windows setup. This is called a **bootable USB**. "Boot" means start up.

Use the official tool

1. On a working Windows computer, go to Microsoft's official Windows download page and download the **Media Creation Tool** for Windows 11.
2. Plug in a pen drive of at least 8 GB. Everything on it will be erased, so copy anything you need off it first.
3. Run the tool and accept the licence terms.
4. Choose the language and edition, then choose **USB flash drive**.
5. Select your pen drive. The tool downloads Windows and copies it. This can take a long time on a slow connection.
6. When it says the drive is ready, label it with a marker: "Win 11 installer".

SAFETY

Download Windows only from Microsoft. Copies from torrent sites, unknown shops or "pre-activated" downloads often contain hidden malware that steals passwords and banking details.

UEFI and legacy BIOS

Every PC has firmware that starts it before Windows: the **BIOS**. Older PCs use **legacy BIOS**. Newer PCs use **UEFI**, which is faster and supports **Secure Boot**, a feature that stops untrusted programs from loading during start-up. Many UEFI boards can also act like a legacy BIOS through a setting called **CSM** (Compatibility Support Module). Windows 11 needs UEFI mode.

GPT and MBR

A drive needs a plan of its partitions (sections). There are two styles:

	MBR (Master Boot Record)	GPT (GUID Partition Table)
Works with	Legacy BIOS	UEFI
Largest usable disk	About 2 TB	Far larger than any disk sold today
Partitions	Up to four main partitions	Up to 128 in Windows
Windows 11	Not supported for start-up	Required

The rule: UEFI starts from GPT disks; legacy BIOS starts from MBR disks. The two must match.

When they do not match

If setup says something like "Windows cannot be installed to this disk" and mentions GPT or MBR, the USB was started in the wrong mode for the disk. Two fixes:

- Open the boot menu again. Many PCs list the same pen drive twice, once with "UEFI:" in front of its name. Choose the UEFI entry.
- If the disk holds nothing you need (you have a checked backup), delete all its partitions in setup. Windows then creates the correct style automatically.

TIP

To see a disk's style, right-click the Start button, open **Disk Management**, right-click the disk name (Disk 0) and choose Properties, then the Volumes tab. "Partition style" shows MBR or GPT.

NOTE

Windows includes a tool called `mbr2gpt` that converts a Windows 10 system disk from MBR to GPT without erasing it, after which the firmware is switched to UEFI. It is useful before an upgrade to Windows 11, but practise it only on a test PC with your teacher, and always back up first.

CHAPTER 3

Installing Windows step by step

With a backup made and a bootable USB ready, you can install. The look of the setup screens changes a little between versions, but the order of the steps stays the same.

Starting from the USB

1. Plug the USB into the PC. Use a USB port on the back of a desktop, which connects straight to the motherboard.
2. Switch on and tap the **boot menu** key at once. It is often F8, F11, F12 or Esc, depending on the maker; the start screen or manual shows it.

3. Choose the USB entry, the "UEFI:" one if there are two.
4. If you see "Press any key to boot from CD or DVD", press a key.

The setup screens

1. Choose the language, time and currency format and keyboard. For India, choose English (India) for the format and the US keyboard layout unless you know you need another.
2. Choose to install Windows. Setup may warn that everything will be deleted; you have a backup, so agree.
3. **Product key:** type it if you have one. If this PC had Windows activated before, choose the option saying you do not have a key. Windows usually activates itself once online.
4. Choose the edition that matches the licence, Home or Pro. The wrong edition will not activate.
5. Accept the licence terms.
6. If asked, choose **Custom** install (install Windows only), not upgrade.
7. **Choose the drive.** For a clean install, select each partition on the Windows drive and delete it until only "Unallocated Space" remains. Select it and continue. Setup creates the small partitions Windows needs.
8. Wait. The PC copies files and restarts several times. Do not switch off.

SAFETY

Deleting partitions erases them. If the PC has more than one drive, check the sizes carefully and delete only on the drive where Windows goes. A second drive full of family photos looks just like any other line in that list.

First-time setup

After the restarts, Windows asks questions:

1. Region (India) and keyboard layout.
2. Network: connect to Wi-Fi or a cable. Windows 11 setup normally expects an internet connection.
3. A name for the device, such as `SHOP-PC` or `RAHUL-LAPTOP`.

4. Sign in. Windows 11 setup normally asks for a **Microsoft account**, which is an email and password used across Microsoft services. Let the owner type their own password; a technician should never ask for it.
5. Create a **PIN**, a short number used to sign in on this computer only.
6. Privacy choices: read each one with the owner. Location, diagnostics and advertising can usually be turned off.

TRY THIS

Install Windows in a virtual machine (a pretend computer that runs inside your real one, using free software such as VirtualBox). You can practise every screen, including deleting partitions, with no risk to real data.

CHAPTER 4

Drivers, Device Manager and Windows Update

A fresh Windows installation is not finished until the drivers and updates are in. A **driver** is a small program that tells Windows how to use one piece of hardware, such as the Wi-Fi card, the graphics chip or the touchpad.

Device Manager

Device Manager lists every piece of hardware. Right-click the Start button and choose Device Manager, or press Win+R and type `devmgmt.msc`.

What you see	What it means
A yellow triangle with !	The device has a problem, often a missing or wrong driver
"Unknown device"	Windows does not know what it is; no driver
A down arrow on the icon	The device is disabled
No mark	The device is working

Right-click a device to find these options:

- **Update driver:** search for a newer driver.

- **Properties, Driver tab, Roll Back Driver:** go back to the previous driver if the new one caused trouble.
- **Disable device** and **Uninstall device.**
- **Scan for hardware changes** (from the Action menu): look for new devices again.

Where to get drivers

1. **Windows Update first.** It finds most drivers automatically.
2. **The PC or motherboard maker's support page.** Search with the exact model number from the sticker on the PC or the laptop's base. Download chipset, network, Wi-Fi, audio, graphics and touchpad drivers for your Windows version.
3. **Graphics chip makers** (NVIDIA, AMD, Intel) for the latest graphics drivers.

TIP

If the network driver is missing, the PC cannot go online to fetch it. Download the LAN or Wi-Fi driver on another computer and bring it over on a pen drive. A phone with USB tethering often works too.

Windows Update

In Windows 11, open Settings, then **Windows Update**. In Windows 10, it is Settings, Update & Security, Windows Update.

1. Click **Check for updates** and install everything offered.
2. Restart when asked, then check again. Repeat until nothing new appears. A new installation may need several rounds.
3. Look in **Advanced options** for **Optional updates**, which sometimes include extra drivers.
4. Set **Active hours** to the times the PC is used, so Windows does not restart in the middle of work.

REMEMBER

Updates fix security holes that criminals use. Pausing them for a few days is fine; switching them off for good is not.

EXAMPLE

After a fresh install at a coaching centre in Kanpur, the projector's picture flickered. Device Manager showed the graphics driver as "Microsoft Basic Display Adapter", a simple stand-in. The technician installed the proper graphics driver from the laptop maker's page and the flicker stopped.

CHAPTER 5

Activation and user accounts

Activation in general terms

Activation confirms that the copy of Windows has a genuine licence. To check, open Settings, System, **Activation** (in Windows 10: Update & Security, Activation).

- Many branded PCs and laptops have their Windows key stored inside the firmware. Setup reads it automatically.
- If a PC was activated before, it usually has a **digital licence**. After a clean install of the same edition, it activates by itself once it is online.
- A **product key** is a 25-character code that comes with a purchased copy.
- After a major hardware change, such as a new motherboard, Windows may need to be activated again. The Activation page has a troubleshooting option for this.

SAFETY

Never use "activator" or "crack" tools. They break the law and they are one of the most common ways malware gets onto Indian office computers. A genuine licence is part of a professional job.

Types of user account

Account	What it can do	Who should use it
Administrator	Install software, change settings, manage other accounts	The owner, for setup and maintenance

Account	What it can do	Who should use it
Standard	Use apps and files; needs an admin password to install or change system settings	Daily use, children, staff
Microsoft account	Signs in with an email; can sync settings and OneDrive	Most home users
Local account	Exists only on this PC	Shared shop or lab machines, where allowed

A good habit is one administrator account for maintenance and standard accounts for daily work. Malware that runs in a standard account can do less damage.

Adding an account

1. Open Settings, then **Accounts**, then **Other users** (in some versions, Family & other users).
2. Choose **Add account**.
3. Enter the person's Microsoft account email, or choose the option for adding a user without a Microsoft account to make a local account.
4. To change the type, select the account, choose **Change account type**, and pick Administrator or Standard.

TRY THIS

On a practice PC, create a standard account called "Student". Sign in as Student and try to install a program. Notice that Windows asks for an administrator's password. That pause is the protection.

CHAPTER 6

Task Manager and a slow PC

"My computer is very slow" is the most common complaint a technician hears. Do not guess. Measure first, using **Task Manager**.

Opening Task Manager

Press **Ctrl+Shift+Esc**. If it opens as a small window, click "More details".

Section	What it shows
Processes	Every running app and how much CPU, memory, disk and network each uses
Performance	Live graphs for CPU, memory, disk, network and GPU
Startup apps	Programs that start automatically, with their startup impact
Details and Services	Background parts of Windows and apps, for advanced work

Click a column heading, such as Memory, to sort and see the biggest users at the top. A frozen program can be closed by selecting it and clicking **End task**.

Reading the clues

What Task Manager shows	Likely cause	Fix
Disk at or near 100% for minutes	A slow hard disk (HDD)	Replace it with an SSD: the biggest single speed-up for an old PC
Memory almost full	Too little RAM, or too many tabs and apps	Close apps, add RAM
CPU high with an unknown process	Possible malware	Run a full security scan
Many apps in Startup apps	Slow start-up	Disable the ones not needed

Startup apps

Many programs add themselves to start-up and run in the background all day. In Task Manager, open **Startup apps** (called Startup in Windows 10). Right-click unneeded items and choose **Disable**. Disabling only stops them starting automatically; they still work when opened. The same list is in Settings, Apps, Startup.

REMEMBER

Leave security software and touchpad or audio drivers enabled. If you do not recognise a name, search for it before disabling it.

Freeing disk space

When the Windows drive is almost full, everything slows down. Try to keep at least 20 GB free.

- **Storage Sense:** Settings, System, **Storage**. Turn on Storage Sense to delete temporary files and empty the Recycle Bin automatically. **Cleanup recommendations** lists large or unused files and apps.
- **Disk Cleanup:** search for Disk Cleanup, choose the C: drive, then **Clean up system files** to also remove leftovers from old updates.
- **Uninstall** unused programs in Settings, Apps, Installed apps.
- Move large videos and photos to another drive or to cloud storage.

EXAMPLE

Imran's laptop in Hyderabad took four minutes to start. Task Manager showed fourteen startup apps and the disk at 100%. Disabling ten startup apps brought it down to under two minutes. Replacing the hard disk with an SSD brought it down to about thirty seconds.

CHAPTER 7

When Windows will not start

Sometimes Windows will not load at all, or crashes as soon as it does. Windows has a built-in repair area called the **Windows Recovery Environment**, or **WinRE**. If Windows fails to start properly two or three times in a row, it usually opens WinRE by itself, often with a screen called **Automatic Repair**.

Getting into WinRE

- **From Windows:** hold **Shift** and click Restart from the power menu. Or open Settings, System, **Recovery** (Windows 10: Update & Security, Recovery) and choose **Restart now** under Advanced startup.
- **If Windows will not load:** switch on, and as soon as the Windows logo appears, hold the power button until the PC turns off. Do this two or three times, and Windows normally opens recovery on the next start.
- **From the installation USB:** start from it, choose your language, then **Repair your computer** instead of Install.

In WinRE choose **Troubleshoot**, then **Advanced options**.

Startup Repair

Startup Repair looks for problems that stop Windows from loading, such as damaged start-up files, and tries to fix them by itself. It is the first thing to try. It can take a while, and sometimes it reports that it could not fix the problem; then move on to the next tool.

Safe Mode

Safe Mode starts Windows with only the basic drivers and services. If Windows works in Safe Mode, the problem is something that loads normally: a driver, a startup app or malware.

1. In WinRE, choose Troubleshoot, Advanced options, **Startup Settings**, then **Restart**.
2. After the restart, press **4** for Safe Mode, **5** for Safe Mode with Networking (internet works), or **6** for Safe Mode with Command Prompt.
3. Undo the latest change: roll back or uninstall the new driver, uninstall the new program, or disable startup apps.
4. Restart normally.

System Restore

System Restore takes Windows back to a **restore point**, a snapshot of system files and settings saved earlier. It does not delete your documents or photos, but it removes programs and drivers installed after that point.

1. In WinRE choose **System Restore**. From inside Windows, press Win+R and type `rstrui`.
2. Choose a restore point from a date before the trouble started.
3. Confirm and wait.

System Restore only works if it was turned on beforehand. To check, search for **Create a restore point**, select the C: drive and look at "Protection". Turn it on for every PC you set up.

Uninstall updates

If the trouble began right after an update, WinRE's Advanced options include **Uninstall Updates**, which removes the latest quality update or feature update.

TIP

Write down exactly what changed just before the problem began: a new driver, a new program, an update, a power cut. The cause is almost always the most recent change.

CHAPTER 8

Blue screens: reading stop codes

A **blue screen** appears when Windows meets an error so serious that it must stop to protect your data. Technicians call it a **stop error** or BSOD (Blue Screen of Death). Recent Windows 11 updates replaced the blue background with a simpler black screen, but it does the same job.

Read before it restarts

The screen shows a **stop code**, written in capital letters with underscores, such as `MEMORY_MANAGEMENT`. Some screens also name the file that failed, ending in `.sys`. Take a photo of the screen with your phone. That one photo is the most useful clue you will get.

Stop code	Often points to
IRQL_NOT_LESS_OR_EQUAL	A faulty or wrong driver
MEMORY_MANAGEMENT	RAM problems, sometimes drivers
INACCESSIBLE_BOOT_DEVICE	Windows cannot reach its drive: a disk fault or a storage setting changed in the BIOS
CRITICAL_PROCESS_DIED	Damaged system files, or a failing disk
VIDEO_TDR_FAILURE	The graphics driver or graphics card

These are clues, not proof. Always test.

A step-by-step plan

- 1. One blue screen, never again?** It may have been a one-off. Note it and watch.
- 2. Started after a change?** Undo it: roll back the driver, remove the program, uninstall the update, or use System Restore.
- 3. Test the RAM.** Press Win+R, type `mdsched` and choose to restart and check. If errors appear, test each stick alone to find the faulty one.
- 4. Check the disk.** Open Command Prompt as administrator and type `chkdsk C: /f`. It runs at the next restart.
- 5. Repair system files.** In Command Prompt as administrator, run these one after the other:

```
DISM /Online /Cleanup-Image /RestoreHealth
sfc /scannow
```

DISM repairs Windows' store of good system files, using Windows Update. Then `sfc` (System File Checker) compares every system file with that store and replaces damaged ones.

1. **Check temperatures and dust.** An overheating PC can crash in many different ways.

DID YOU KNOW

Windows keeps a record of crashes. Search for **View reliability history** to see a calendar with a red cross on each day something failed, and a short description of what it was.

EXAMPLE

A desktop in a Ludhiana office showed `MEMORY_MANAGEMENT` twice a week. Windows Memory Diagnostic found errors. The technician tested each of the two RAM sticks alone; one failed. A replacement stick ended the crashes.

CHAPTER 9

Fixing network problems

"No internet" can mean a problem in the PC, the cable or Wi-Fi, the router, or the internet provider. A technician works outwards from the PC, one step at a time.

Quick checks

1. Is **Airplane mode** off? Is Wi-Fi switched on?
2. Do other devices, such as phones, work on the same Wi-Fi? If none do, the problem is the router or the provider, not this PC.
3. Restart the router: switch it off, wait 30 seconds, switch it on, and wait two minutes.
4. For a cable connection, check that the network port's lights blink.

Using Command Prompt

Open Command Prompt and use these commands:

Command	What it tells you
<code>ipconfig</code>	The PC's IP address and default gateway (the router)
<code>ping 192.168.1.1</code>	Whether the PC can reach the router (use your gateway address)
<code>ping 8.8.8.8</code>	Whether it can reach the internet, by number
<code>ping google.com</code>	Whether names are being turned into numbers (DNS)

Reading the results:

- An address starting `169.254` means the PC got no address from the router. Check the cable or Wi-Fi, and restart the router.
- Router pings work but `8.8.8.8` fails: the problem is the router's internet connection or the provider.
- `8.8.8.8` works but `google.com` fails: a DNS problem. Try `ipconfig /flushdns`.

Repair commands

Run Command Prompt as administrator:

```
ipconfig /release
ipconfig /renew
ipconfig /flushdns
netsh winsock reset
```

The first two ask the router for a fresh address. The third clears stored name lookups. The last resets Windows' network settings for programs and needs a restart.

If nothing works, try **Network reset**: Settings, Network & internet, Advanced network settings, Network reset (Windows 10: Network & Internet, Status, Network reset). It reinstalls network adapters and resets their settings, so you will need to enter Wi-Fi passwords again.

TIP

For Wi-Fi that connects but keeps dropping, choose "Forget" on the network and join it again, and update the Wi-Fi driver from the maker's page.

Removing malware

Malware is any harmful software: viruses, spyware that steals passwords, adware that floods the screen with advertisements, and **ransomware**, which locks files and demands money.

Signs of infection

- Pop-up advertisements, even when no browser is open.
- The browser's home page or search engine changed by itself.
- New toolbars or extensions nobody installed.
- The PC is suddenly slow, with an unknown process using the CPU.
- Friends receive strange messages from the owner's accounts.
- Files renamed with odd endings, and a note asking for payment.

Step-by-step removal

1. **Disconnect from the internet** to stop the malware sending data or spreading.
2. **Note what the owner saw** and when it started.
3. **Uninstall unknown programs** in Settings, Apps, Installed apps. Sort by install date; recent unknown names are suspects. Also remove any remote access app a stranger asked the owner to install.
4. **Run a full scan** in Windows Security: Virus & threat protection, Scan options, **Full scan**.
5. **Run a Microsoft Defender Offline scan** from the same Scan options. The PC restarts and scans before Windows loads, which catches malware that hides while Windows is running.
6. **Check startup apps** and disable anything suspicious.
7. **Clean the browsers.** Remove unknown extensions and reset the browser settings.
8. **Scan again** until it comes back clean.
9. **Change passwords** for email, banking and social accounts from a different, clean device, and turn on two-step verification.

SAFETY

If ransomware has locked the files, do not pay. Payment does not guarantee the files come back, and it funds crime. Restore from a backup and report it. For money stolen online, call the national cyber crime helpline 1930 at once and report at [cybercrime.gov.in](https://www.cybercrime.gov.in).

REMEMBER

If the infection keeps coming back, or the PC handled banking for a business, the safest choice is to back up personal files (not programs), scan them, and reinstall Windows cleanly.

CHAPTER 11

Reset this PC and the technician's job sheet

Reset this PC

Reset this PC reinstalls Windows from inside Windows, without a USB. Open Settings, System, **Recovery**, then **Reset PC** (Windows 10: Update & Security, Recovery, Reset this PC). It can also be started from WinRE.

Choice	What happens
Keep my files	Reinstalls Windows and removes apps and settings, but keeps personal files
Remove everything	Removes files, apps and settings
Cloud download	Downloads a fresh copy of Windows from Microsoft
Local reinstall	Rebuilds Windows from files already on the PC

When a PC is being sold or given away, choose **Remove everything** and, if offered, the option to **clean the drive**. It takes longer, but it makes old files much harder to recover. Even with "Keep my files", make a backup first.

Choosing the right fix

Situation	Try first
Problem began after a driver or program change	Roll back or uninstall, or System Restore
Windows will not load	Startup Repair, then Safe Mode
Many problems, slow and messy	Reset this PC, keeping files
Malware keeps returning	Back up files, clean install
Hardware upgrade to SSD	Clean install from USB

The technician's job sheet

A **job sheet** is a written record of each repair. It protects the customer and the technician, and it helps if the same PC comes back. A simple sheet looks like this:

Field	Example entry
Job number and date	0142, 12 March
Customer name and phone	Suresh Verma, mobile number
Device and serial number	Desktop, black cabinet, serial from sticker
Problem as told by customer	"Very slow, pop-ups, Wi-Fi drops"
Accessories received	Power cable, no bag
Data backup	Yes: Desktop, Documents, billing data, to external drive
Checks and findings	Disk at 100%, 3 adware programs, old Wi-Fi driver
Work done	Removed adware, full and offline scans, disabled 8 startup apps, Wi-Fi driver updated
Parts used and charges	500 GB SSD fitted; charges as agreed with customer, for example ! 3,800
Tested by and result	Started in 35 seconds; Wi-Fi stable for 2 hours

Field	Example entry
Customer signature on return	

TIP

Write the customer's own words in the "problem" box, not your guess. "Screen goes black when the fan gets loud" is a clue; "display issue" is not.

REMEMBER

Never ask a customer for their passwords to write on the sheet. Ask them to sign in themselves when needed, and to change any password they had to share.

CHECK YOURSELF

Practice questions

1. Why must you make and check a backup before installing Windows?
2. Name four places on a PC where important files are often kept.
3. How can you find out whether a PC uses UEFI or legacy BIOS?
4. What happened to Windows 10 support in October 2025, and why does it matter?
5. What is the minimum size of pen drive for the Media Creation Tool, and what happens to its contents?
6. Which partition style does UEFI start from, and which does legacy BIOS start from?
7. Give two limits of MBR disks.
8. Setup says Windows cannot be installed to the disk because of its partition style. Give two ways to fix this.
9. Why should you check drive sizes carefully before deleting partitions?
10. What does a yellow triangle in Device Manager mean?

11. A new graphics driver causes problems. Which Device Manager option helps?
12. Why should you never use activation crack tools?
13. What is the difference between an administrator account and a standard account?
14. Which keys open Task Manager directly?
15. Task Manager shows the disk at 100% for minutes. What is the likely cause and best fix?
16. What does disabling a startup app do, and not do?
17. Name two built-in ways to free disk space.
18. Give two ways to reach the Windows Recovery Environment.
19. What do the keys 4 and 5 do in Startup Settings?
20. Does System Restore delete your documents? What does it remove?
21. What should you do first when a blue screen appears?
22. Which two commands repair Windows system files, and in which order?
23. A PC shows an IP address starting with 169.254. What does this mean?
24. Give the first two steps of malware removal.
25. When giving away a PC, which Reset this PC options should you choose?

ANSWER KEY

Answers

1. Installing or repairing can erase the drive. Checking the backup proves the files can really be opened.
2. Any four of: Desktop, Documents, Downloads, Pictures, other drives such as D:, accounting data folders, email data files.
3. Run `msinfo32` and read the BIOS Mode line.
4. Microsoft ended regular support, so Windows 10 no longer gets regular security updates and is riskier online.
5. 8 GB. Everything on it is erased.

6. UEFI starts from GPT; legacy BIOS starts from MBR.
7. It cannot use more than about 2 TB of a disk, and allows only four main partitions.
8. Start the USB again using its "UEFI:" boot entry, or (with a checked backup) delete all partitions on the disk so setup creates the correct style.
9. Deleting a partition erases it, and on a PC with two drives you could erase the wrong one.
10. The device has a problem, often a missing or wrong driver.
11. Roll Back Driver, on the Driver tab of the device's Properties.
12. They are illegal and often carry malware.
13. An administrator can install software and change system settings; a standard account needs an administrator's password for those.
14. Ctrl+Shift+Esc.
15. A slow hard disk. Replace it with an SSD.
16. It stops the app starting automatically; it does not uninstall the app, which still works when opened.
17. Any two of: Storage Sense, Disk Cleanup with Clean up system files, uninstalling unused apps, Cleanup recommendations.
18. Any two of: Shift plus Restart; Settings, Recovery, Advanced startup; failing to start two or three times; Repair your computer from the installation USB.
19. 4 starts Safe Mode; 5 starts Safe Mode with Networking.
20. No. It removes programs and drivers installed after the restore point.
21. Photograph the screen to record the stop code.
22. DISM /Online /Cleanup-Image / RestoreHealth first, then sfc / scannow.
23. The PC did not get an address from the router, so check the connection and restart the router.
24. Disconnect from the internet, then note what the owner saw and when it started.
25. Remove everything, plus the option to clean the drive.

WORD LIST

Glossary

Activation

the check that a copy of Windows has a genuine licence.

Backup

a second copy of important files, kept in another place.

BIOS

the firmware that starts a computer before Windows loads.

Bootable USB

a pen drive that a computer can start from, such as a Windows installer.

Device Manager

the Windows tool that lists hardware and its drivers.

Digital licence

a record that a PC has a genuine Windows licence, so it can activate without a key.

DISM

a command that repairs Windows' store of system files.

Driver

a small program that lets Windows use a piece of hardware.

GPT

the modern partition style used with UEFI.

Job sheet

a written record of a repair job, from problem to sign-off.

Malware

any harmful software, such as viruses, spyware or ransomware.

MBR

the older partition style used with legacy BIOS.

Media Creation Tool

Microsoft's official program for making a Windows installer.

Partition

a section of a drive that Windows treats as a separate area.

Ransomware

malware that locks files and demands payment.

Restore point

a saved snapshot of system files and settings.

Safe Mode

starting Windows with only basic drivers and services.

Secure Boot

a UEFI feature that blocks untrusted start-up programs.

SFC

System File Checker, which replaces damaged system files.

Startup apps

programs that run automatically when you sign in.

Stop code

the error name shown on a blue or black crash screen.

Storage Sense

a Windows feature that clears temporary files automatically.

TPM

a security feature on the motherboard that Windows 11 needs.

UEFI

modern firmware that replaces the legacy BIOS.

WinRE

the Windows Recovery Environment, Windows' built-in repair area.



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