

# COMPUTER

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## ◆ Definitions (Simple Language)

### 1. Troubleshooting

Troubleshooting means finding and fixing problems in computers, machines, or systems to make them work properly again.

### 2. Systematic Troubleshooting

A step-by-step method used to find the cause of a problem and solve it.

### 3. Downtime

The time when a computer or system is not working or not available.

### 4. Data Integrity

Keeping data correct, safe, and unchanged.

### 5. Malware

Harmful software like viruses that can damage a computer or steal data.

### 6. Peripheral Devices

External devices connected to a computer like a mouse, keyboard, or printer.

### 7. RAM

Random Access Memory – temporary memory that stores data while the computer is working.

### 8. Hard Drive

A storage device that holds data like files, programs, and the operating system.

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## ◆ Short Questions and Answers

### 9. What is system troubleshooting and why is it important?

System troubleshooting is the process of finding and fixing problems in computers or machines. It is important because it helps keep systems working, prevents delays, and saves money.

### 10. List the seven steps of the systematic troubleshooting process.

1. Identify the problem
2. Make a theory of possible causes
3. Test the theory

4. Plan a solution
5. Apply the solution
6. Check if the system works properly
7. Write down what was done and the result

**11. Why is identifying the problem the first step in troubleshooting?**

Because you must first know what is wrong before you can fix it. For example, if a computer doesn't turn on, you recognize the issue first.

**12. What does 'Establish a theory of probable cause' mean?**

It means thinking about what could be the reason for the problem, like guessing possible causes.

**13. Why should we document our troubleshooting steps?**

To keep a record of what the problem was, how it was fixed, and the result. This helps if the problem happens again.

**14. How does troubleshooting help prevent downtime?**

It quickly solves problems, so systems don't stay off for a long time, especially in businesses.

**15. What is data integrity and how does troubleshooting help it?**

Data integrity means keeping data correct and safe. Troubleshooting fixes errors that may damage or change data.

**16. How does troubleshooting improve computer performance?**

It finds and solves problems like slow speed, overheating, or software bugs so the system runs better.

**17. What are common software-related issues?**

- Application freezing
- Unresponsive devices
- Crashing programs
- Slow performance

**18. How can you solve an application freezing issue?**

Use Task Manager (Ctrl + Alt + Delete) to end the task. If it continues, update or reinstall the application.

**19. What should you do if a peripheral device is not working?**

Check connections, unplug and replug the device, and update the driver.

**20. Why is restarting a computer often helpful?**

It clears memory, stops stuck processes, and refreshes the system. Many software issues can be fixed by restarting.

**21. What are common hardware-related problems?**

- Loose cables
- Overheating
- Non-working devices (keyboard, monitor)

**22. How can overheating be prevented?**

Keep the computer in a ventilated space and clean dust from vents and fans.

**23. What is cable management and why is it important?**

Keeping cables neat and organized to prevent disconnection, accidents, or damage.

**24. What are signs of RAM failure?**

Frequent crashes, blue screen errors, and poor performance.

**25. How can you check if RAM is faulty?**

Use memory testing tools like Windows Memory Diagnostic or MemTest86.

**26. What are signs of hard drive failure?**

Strange clicking sounds, slow performance, and corrupted files.

**27. How can you check hard drive health?**

Use tools like CrystalDiskInfo or SMART monitoring software.

**28. Why should we upgrade or replace computer components?**

To improve speed, fix problems, and extend the system's life.

**29. Give an example of replacing hardware to fix a problem.**

If a hard drive is failing, replacing it prevents data loss and keeps the computer working.

**30. What are basic security practices in computing?**

- Use antivirus software
- Create strong passwords
- Update software regularly

**31. How can strong passwords protect your system?**

They prevent hackers from easily guessing and accessing your accounts or data.

**32. What is the benefit of applying system updates?**

They fix bugs, patch security holes, and improve performance.

**33. What is data backup and why is it needed?**

Making copies of data to keep it safe in case of loss or system failure.

**34. Name two ways to back up your data.**

1. Use external storage like USB or hard drives
2. Use cloud storage like Google Drive or OneDrive

**35. What are the benefits of using online troubleshooting resources?**

You can find solutions from people with similar problems using guides, videos, or forums.

**36. Why is communication important when helping others with computer issues?**

To understand the problem better and explain solutions clearly.

**37. How does sharing your troubleshooting knowledge help others?**

It teaches them how to fix similar issues and builds teamwork and skills.

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