

Assignment module 4 Troubleshooting and help desk

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Section 1: Multiple Choice

1. What is the first step in the troubleshooting process?

b) Identifying the problem

2. Which tool is commonly used to diagnose hardware issues by testing electrical connections?

c) Multimeter

3. Which Windows utility is used to view system logs and diagnose issues?

c) Event Viewer

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Section 2: True or False

4. **True**

Safe Mode loads only essential system services and drivers to help troubleshoot and fix operating system problems.

5. **True**

A system restore point is a snapshot of system files, registry, and settings that allows you to revert the system to a previous working state.

6. **True**

Ping is a command-line utility that tests network connectivity by sending ICMP echo requests and receiving echo replies.

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Section 3: Short Answer

7. Steps to Troubleshoot a Computer That Fails to Boot

1. Identify the problem

Check if the computer powers on. Look for error messages, beeping sounds, or a blank screen.

2. Check power supply

Ensure the power cable, battery (for laptop), and power supply unit (PSU) are working properly.

3. Inspect hardware connections

Check RAM, hard drive, and internal cables to make sure they are properly connected.

4. Check BIOS/UEFI settings

Make sure the correct boot device (HDD/SSD) is selected.

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5. Boot into Safe Mode

Try starting the system in Safe Mode to detect driver or software issues.

6. Run Startup Repair

Use Windows recovery options to repair startup problems.

7. Check hard drive health

Run disk check tools to detect hard drive errors.

8. Restore system

Use System Restore to revert to a previous working state.

9. Reinstall operating system (if needed)

If all else fails, reinstall the OS after backing up important data.

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Section 4: Practical Application

Practical: Troubleshooting Network Connectivity Using ipconfig (Windows)

Follow these steps:

Step 1: Open Command Prompt

1. Press Windows + R
 2. Type cmd
 3. Press Enter
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Step 2: Check IP Configuration

Type the command:

ipconfig

Check the following:

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- IPv4 Address
- Subnet Mask
- Default Gateway

If the IP address starts with **169.254.x.x**, it means the system failed to get an IP from DHCP.

Step 3: Release IP Address

If there is an issue, type:

`ipconfig /release`

This removes the current IP address.

Step 4: Renew IP Address

Then type:

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`ipconfig /renew`

This requests a new IP address from the DHCP server.

Step 5: Check Detailed Information

To view full network details:

`ipconfig /all`

This shows:

- MAC address
 - DHCP status
 - DNS server
 - Lease information
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Step 6: Flush DNS (If Website Not Opening)

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ipconfig /flushdns

This clears DNS cache.

Conclusion:

Using ipconfig, you can:

- Check IP settings
- Detect DHCP issues
- Renew IP address
- Fix DNS problems

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Section 5: Essay

Essay: Importance of Effective Communication Skills in a Helpdesk or Technical Support Role

1. Effective communication skills are essential in a helpdesk or technical support role because support staff interact directly with users who may not have technical knowledge. Good communication ensures that problems are understood clearly and resolved efficiently.
2. First, effective communication helps in **understanding the user's problem accurately**. Customers often describe issues in simple or unclear terms. A helpdesk professional must listen carefully, ask the right questions, and gather complete information before providing a solution.

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3. Second, it helps in **explaining technical solutions in simple language**. Technical support staff must avoid complex jargon and explain solutions in a way that non-technical users can understand. Clear instructions reduce confusion and prevent further errors.
4. Third, good communication builds **customer trust and satisfaction**. Polite behavior, patience, and empathy make users feel valued and supported. Even if the issue takes time to resolve, proper communication keeps customers calm and confident.
5. Fourth, communication improves **team coordination**. Helpdesk staff often work with other IT teams. Clear documentation

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and proper reporting ensure smooth issue escalation and faster resolution.

6. Additionally, effective communication reduces misunderstandings, saves time, and increases overall productivity in the organization.