

## Assignment module 4: Troubleshooting

### Section 1: Multiple Choice

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

- a) Implementing a solution
- b) Identifying the problem
- c) Testing the solution
- d) Documenting the solution

**Correct Answer: b) Identifying the problem**

2. Which of the following tools is commonly used to diagnose hardware issues by testing electrical connections?

- a) Loopback plug
- b) Toner probe
- c) Multimeter
- d) Cable tester

**Correct Answer: c) Multimeter**

3. Which Windows utility can be used to view system logs, monitor performance, and diagnose hardware and software issues?

- a) Task Manager
- b) Device Manager
- c) Event Viewer
- d) Control Panel

**Correct Answer: c) Event Viewer**

## Section 2: True or False

4. True or False:

**Safe Mode is a diagnostic mode in Windows that loads only essential system services and drivers, allowing users to troubleshoot and fix problems with the operating system.**

**Ans = True**

5. True or False:

**A system restore point is a snapshot of the computer's system files, registry, and configuration settings at a specific point in time, which can be used to revert the system**

to a previous state if problems occur.

Ans = True

## 6. True or False

**Ping is a command-line utility used to test network connectivity by sending ICMP echo requests to a target device and waiting for ICMP echo replies.**

Ans : True

## Section 3: Short Answer

**7. Describe the steps involved in troubleshooting a computer that fails to boot into the operating system.**

**Answer:**

To troubleshoot a computer that won't boot into the OS:

1. **Check Power Supply:**
  - Make sure the computer is plugged in and the power supply is functioning. Look for lights, sounds, or fan movement.
2. **Listen for POST Beeps or Messages:**
  - Beep codes or error messages during startup can indicate hardware failures

## Section 4: Practical Application

**8. Demonstrate how to troubleshoot network connectivity issues on a Windows computer using the `ipconfig` command.**

**Answer:**

To troubleshoot network issues using the `ipconfig` command:

1. **Open Command Prompt:**
  - o Press Windows + R, type `cmd`, and press Enter.
2. **View IP Configuration:**
  - o Run `ipconfig`
  - o Check the IPv4 address, subnet mask, and default gateway.
  - o If you see `169.254.x.x`, the device failed to obtain an IP from the DHCP server.
3. **Release & Renew IP Address:**
  - o `ipconfig /release` — Releases the current IP.
  - o `ipconfig /renew` — Requests a new IP from the DHCP server.
4. **Flush DNS Cache:**
  - o `ipconfig /flushdns` — Clears outdated or corrupt DNS data.
5. **View Detailed Adapter Info:**
  - o `ipconfig /all` — Displays MAC addresses, DNS servers, DHCP status, etc.
6. **Test Connectivity (Optional):**
  - o Follow up with `ping` or `tracert` to test reachability of local or internet hosts.

## Section 5: Essay

**9. Discuss the importance of effective communication skills in a helpdesk or technical support role.**

**Answer:**

Effective communication is a **key skill** in any helpdesk or technical support role for the following reasons:

- **Understanding User Problems:**  
Active listening allows support staff to clearly identify issues and ask the right questions.
- **Explaining Technical Issues Clearly:**  
IT personnel must explain complex issues in **simple, non-technical language** that users can understand.
- **Building Trust and Rapport:**  
Patience and empathy help create a positive support experience, even when users are frustrated or anxious.
- **Efficient Team Collaboration:**  
Clear communication between technicians, departments, or external vendors ensures quick resolution and avoids duplication of effort.