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**Assignment module 4: Troubleshooting and Helpdesk**

**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

**Ans:** b) Identifying the problem

**Reason**: - If you don’t know what the problem is you cannot fix it.

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

**Ans:** c) Multimeter

**Reason:** - A multimeter is used to diagnose hardware issues because it tests electrical connections, voltage, current, and resistance.

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

**Ans:** c) Event Viewer

**Reason:** - Event Viewer shows a record of everything happening on your computer like errors or warnings. It helps to check how the system is working.

**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.

**Ans:**

1. Check Power Supply – Make sure the computer is plugged in power cable is fine and the power button works.
2. Check Monitor and Cables – Ensure the monitor is on and all cables (power, display) are connected properly.
3. Remove External Devices – Unplug USB, CD, external drives, or any device that may stop booting.
4. Listen for Beep Sounds – Beep codes can indicate specific hardware problems.
5. Enter BIOS/UEFI – Press keys like F2/DEL to enter BIOS, check if the hard drive is detected and boot order is correct.
6. Try Booting in Safe Mode – Use F8 or Shift + Restart to boot into Safe Mode and fix software issues.
7. Use Startup Repair Tool – Boot from a recovery USB/DVD and run the Windows Startup Repair.
8. Perform System Restore – Use restore points to bring the system back to a previous working state.
9. Check Hardware Components – Re-seat or test RAM, hard drive, and other components to ensure proper connection.
10. Scan for Viruses (if Safe Mode works) – Run an antivirus scan in Safe Mode to check for malware issues.
11. Reinstall the Operating System – If nothing else fixes the problem, reinstall Windows as the last option.

**Section 4: Practical Application**

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

**Ans:**

1. Open Command Prompt – Press Windows + R, type cmd, and press Enter to open the command window.
2. Check IP Address (ipconfig) – Type ipconfig and press Enter to see your IP details. Check if your computer has a valid IP address.
3. Release IP (ipconfig /release) – Type ipconfig /release to remove the current IP address.
4. Renew IP (ipconfig /renew) – Type ipconfig /renew to ask the router for a new IP address.
5. Flush DNS (ipconfig /flushdns) – Type ipconfig /flushdns to clear old DNS cache, helpful if websites are not loading.
6. Test the Connection Again – After running these commands, open a website or use ping google.com to check if the internet is working.

**Section 5: Essay**

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

**Ans:**

1. Understand the Problem – Good listening helps to fully understand the user’s issue.
2. Explain Clearly – Use simple words so the user can easily follow the steps.
3. Keep Users Calm – Polite and friendly communication reduces user stress.
4. Avoid Confusion – Clear instructions save time and prevent mistakes.
5. Work with Team – Sharing updates clearly helps the team solve issues faster.
6. Write Clear Notes – Proper records help others know what was done and why.