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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

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, it measures current, voltage and checks cables, power supply are working correctly or not

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, it used to view system logs, application logs, security logs, monitor performance and detect errors.

Section 2: True or False

4. 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, it loads only the essential system services and drivers, making it easier to troubleshoot and fix operating system problems.

5. 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, it snapshots of system, registry does not affect file, folders.

6. 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, ICMP (Internet Control Message Protocol) echo request to target other devices like computer, router.

Section 3: Short Answer

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

Ans: -

**1. Initial Checks (Power & Hardware)**

* Ensure the power cable and battery are connected properly.
* Check if the power supply, fans, and indicator LEDs are working.

**2. BIOS/UEFI Checks**

* Enter the BIOS/UEFI setup.
* Check if the system detects the hard drive/SSD.

**3. Safe Mode / Advanced Boot Options**

* Restart and press F8, Shift + F8, or use Recovery options (Windows 10/11).
* Try booting into Safe Mode.

**4. Run Startup Repair**

* Boot from a Windows installation media or recovery drive.
* Choose Repair your computer → Troubleshoot → Startup Repair.
* Windows will attempt to fix boot errors automatically.

**5. Use System Restore**

* From recovery options, select System Restore.

**6. Reinstall Operating System**

* If all else fails, backup data (if possible) and perform a clean OS installation.

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 Win + R, type cmd, and press **Enter**.
* This opens the Command Prompt.

**2: View IP Configuration**

Type: - ipconfig

* This displays your computer’s IP address, subnet mask, and default gateway.
* Check for valid IP address.

**3: Release and Renew IP Address**

If the IP address is invalid or missing:

ipconfig /release

ipconfig /renew

**4:: Clear DNS Cache**

If websites are not loading but the network is connected:

ipconfig /flushdns

**5: Test Connectivity**

* After renewing the IP, try:

ping 8.8.8.8

ping google.com

* If ping to **8.8.8.8** works but not **google.com**, the issue is with **DNS**.
* If neither works, the issue might be with the router or ISP.

Section 5: Essay

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

Ans: -

**1. Building Trust with Users**

**2. Understanding the Problem Accurately**

**3. Explaining Solutions Clearly**

**4. Enhancing Team Collaboration**

**5. Improving Customer Satisfaction & Business Image**