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

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

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 Pane

Ans:- 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.

Ans:-

- **Check Power Supply:** Ensure the power cable is connected and the PC is getting power.
- **Listen for Beep Codes or Check Indicators:** These may point to hardware issues.

- **Disconnect External Devices:** Remove USB drives and peripherals that may interfere.
- **Enter BIOS/UEFI:** Check if the hard drive is detected and the boot order is correct.
- **Boot into Safe Mode or Recovery:** Try pressing **F8**, **Shift + F8**, or **F11** during startup.
- **Run Startup Repair:** Use Windows recovery tools to attempt automatic repair.
- **Use System Restore:** Roll back to a restore point if available.
- **Check for Hardware Issues:** Test RAM, hard drive, or replace CMOS battery if needed.

Section 4: Practical Application

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

Ans:- Here's how to use the `ipconfig` command to diagnose and fix network issues on a Windows computer:

Steps:

1. **Open Command Prompt:**
   Press `Win + R`, type `cmd`, and press **Enter**.
2. **Check IP Configuration:**
   Type:

```
nginx
CopyEdit
ipconfig
```

➤ Look for details like **IPv4 address**, **Subnet Mask**, and **Default Gateway** to confirm if the device has a valid IP.

3. **Release Current IP Address:**
   Type:

```
arduino
CopyEdit
ipconfig /release
```

➤ This disconnects the current IP address.

4. **Renew IP Address:**
   Type:

```
bash
CopyEdit
ipconfig /renew
```

➤ This requests a new IP from the DHCP server.

5. **Flush DNS Cache (Optional):**
   If there are DNS issues, type:

```
bash
CopyEdit
ipconfig /flushdns
```

➤ Clears the DNS resolver cache.

Section 5: Essay

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

Ans:- Effective communication is essential in helpdesk and technical support roles because it ensures clear understanding between the technician and the user, leading to faster and more accurate problem resolution.

Key Reasons:

- **Clear Problem Understanding:** Good listening helps identify the real issue.
- **User-Friendly Explanations:** Technicians must explain technical solutions in simple, non-technical terms.
- **Customer Confidence:** Friendly and professional communication builds trust and satisfaction.
- **Accurate Documentation:** Clear written communication ensures proper logging and future reference.
- **Team Collaboration:** Helps in sharing issues and solutions effectively with other IT staff.