**Module 4:** **Troubleshooting and Helpdesk**

**Section 1: Multiple Choice:-**

1. What is the first step in the troubleshooting process?
   1. Implementing a solution
   2. Identifying the problem
   3. Testing the solution
   4. Documenting the solution

**Ans:** Identifying the problem

1. Which of the following tools is commonly used to diagnose hardware issues by testing electrical connections?
   1. Loopback plug
   2. Toner probe
   3. Multimeter
   4. Cable tester

**Ans:** Multimeter

1. Which Windows utility can be used to view system logs, monitor performance, and diagnose hardware and software issues?
   1. Task Manager
   2. Device Manager
   3. Event Viewer
   4. Control Panel

**Ans:** Event Viewer

**Section 2: True or False:-**

1. 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

1. 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

1. 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:-**

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

**Ans:** This is steps involved in troubleshooting a computer that fails to boot into the operating system:

1. Power and Hardware Checks:

* Confirm the computer is receiving power and see like lights, fan noise, or screen activity.
* If you not see then power supply, battery, or cables. Sometimes loose RAM or storage drives also boot issues, so reseating them can fix.

1. BIOS/UEFI Settings:

* Open BIOS/UEFI. Check if hard drive/SSD is detected and set as first in boot order.

1. Error Codes and Messages:

* Check for beep sounds, lights, or error messages. They can tell you which part is not working.

1. Safe Mode and Recovery Options:

* If the computer starts but doesn’t load fully, try using Safe Mode or recovery tools to fix the problem.

1. Operating System Corruption:

* System files might be broken. Use repair tools or file check options to fix them.

1. Hardware Failures:

* If software fixes don’t work then check the RAM, hard drive, or other parts for problems.

1. Reinstallation of the Operating System:

* If nothing works, save your files and install the OS again.

1. Post-Recovery Measures:

* After fixing, update drivers, check for viruses, and keep copies of your files.

**Section 4: Practical Application:-**

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

**Ans.** This isa steps of troubleshoot network connectivity issues on a Windows computer using the ipconfig command.

1. Open Command Prompt
2. Check IP (use **ipconfig** command):

This is show information like IP address and more.

* + If you see a proper IPv4 address (like 192.168.x.x), it’s okay.
  + If you see 169.254.x.x, there’s a problem with your connection.

1. Release and Renew IP Address:

If your IP show wrong (like 169.254.x.x), you can run this command:

* + ipconfig /release (Release New IP)
  + ipconfig /renew (Renew IP)

🡪 This used for provide a router new IP.

1. Check DNS(Domain Name System):

This clears old DNS (Domain Name System) records and provide new DNS.

* + ipconfig /flushdns

1. Test:

Try opening a website or type:

* Ping google.com
* Than after complet this steps and check this ipconfig command.

**Section 5: Essay :-**

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

**Ans.**

1. Introduction:

🡪Helpdesk and support people talk with customers.

🡪Talking skills are same important as work skills.  
🡪Simple and clear talk makes trust and solves problems fast.

1. Understanding the User’s Problem:  
   🡪Listen carefully to know the real problem.  
   🡪Ask easy questions to remove confusion.  
   🡪Users don’t know computer words, so staff must understand them.
2. Explaining Solutions Clearly:  
   🡪Use very simple words, not hard words.  
   🡪Tell steps one by one.  
   🡪Clear steps stop repeat calls and mistakes.
3. Reducing Stress and Misunderstandings:  
   🡪Wrong talking makes user and staff upset.  
   🡪Give updates so users stay calm.  
   🡪No difficult words, it avoids confusion.
4. Team Collaboration  
   🡪Sometimes big problems go to senior staff.  
   🡪Clear talking makes handover easy.  
   🡪Sharing ideas with team saves time.
5. Enhancing Efficiency and Productivity:  
   🡪Simple and clear talk makes calls short.  
   🡪Problems solved fast with easy steps.  
   🡪This saves company time and money.
6. Conclusion:  
   🡪 In support job, good talking makes customer happy.

🡪If talking is not good, knowledge is useless.

🡪Good talking = good service, happy user, success.