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**Module -4: Troubleshooting and Helpdesk**

**Section 1: Multiple Choice**

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

Implementing a solution

Identifying the problem

testing the solution

documenting the solution Answer: **b. Identifying the problem**

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

Loopback plug

Toner probe

Multimeter

Cable tester Answer: **c. multimeter**

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

Task Manager

Device Manager

Event Viewer

Control Panel Answer : **c. Event viewer**

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.

Answer: **True**, Safe Mode in Windows is indeed a diagnostic mode. It loads only essential drivers and services (like keyboard, mouse, display, basic system files). Helps to troubleshoot startup issues, driver conflicts, malware, or system errors.

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

Answer: **True**

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.

Answer: **True**

**Section 3: Short Answer**

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

Answer:

Step 1: Power Check: Sabse pehle dekh PC/laptop on ho raha hai ya nahi. Power cable, plug, UPS, SMPS sab sahi connected hai ya nahi.

Step 2: Display Check: Monitor pe kuch aa raha hai ya "No Signal" , Agar screen blank hai to RAM, Hard Disk ya Graphic card issue ho sakta hai.

Step 3: BIOS/UEFI Settings: Boot ke time Del / F2 press karke BIOS kholo. HDD/SSD detect ho rahi hai ya nahi check karna h. Boot order me Hard Disk sabse pehle honi chahiye.

Step 4: Safe Mode: Restart karke F8 dabao aur Safe Mode open karo, Agar Safe Mode me open ho jaye → drivers/settings ki problem hai.

Step 5: Windows Recovery/Repair: Windows USB/DVD lagao. "Repair your computer" select karo, Startup Repair ya System Restore run karo.

Step 6: Hardware Check: RAM nikal ke wapas lagao. Hard Disk ke cables tight karo. Agar possible ho to HDD dusre PC me test karo.

Step 7: Last Option → Reinstall OS: Agar kuch kaam na kare → data backup leke Windows fresh install karo.

#### Section 4 Practical Application

8. Demonstrate how to troubleshoot network connectivity issues on a Windows computer using the ipconfig command. simple and easy answer understand

Answer:

Open CMD

Check IP Address: Command: ipconfig ○ If you see 192.168.x.x / 10.x.x.x → IP is fine.

○ If you see 169.254.x.x → problem in network (no IP from router).

Solution: Run ipconfig /release then ipconfig /renew to get a new IP. 3. Flush DNS Cache:

Command: ipconfig /flushdns

Solution: Fixes issue if websites are not opening properly.

Check Gateway: In ipconfig output, look for Default Gateway (usually router IP like 192.168.1.1).

Solution: If missing → problem in router, restart it.

Final Step: After commands, again run ipconfig to confirm, You should have IPv4 Address + Subnet Mask + Default Gateway. Now check internet.

#### Section 5 Essav

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

Answer:

1. Problem ko samjhna

User hamesha technical language mein explain nahi karta.

Example: User bolega "Netchalnhirha" → support staff ko questions puch kar actual issue samjhna h (IP, cable, WiFi etc).

Good communication = correct problem understanding.

2. Solution explain karna (simple language)

User technical nahi hota, to solution simple words mein dena h.

Example: Instead of saying "ResetDNSResolverCache", bolo → "Typethiscommand:ipconfig /flushdns,thenpressEnter."

Step by step clear instructions = easy solution.

3. Trust aur confidence build karna

Agar staff politely aur patiently baat kare to user ko lagega ki uski problem seriously li ja rahi h.

Ye company ki image improve karta h.

4. Time aur error bachana

Clear communication se galat samjhne ki chance kam hoti h.

Problem jaldi solve hoti h = time save.

5. Difficult situation handle karna

Kabhi-kabhi user gusse mein hota h.

Agar staff calmly, politely aur empathetically baat kare → user ka gussa kam ho jata h.

Professional image maintain hoti h.