

Hardware Networking

## TERM-1 Comptia A+ N+ Assignment

#### Module 2 {Installation and Maintenance of Hardware and Its components}

**Topic: User Management**

##### Assignment Level Basic

1. What is user management?

Answer:-

User management is a system to handle activities related to individuals' access to devices, software, and services.

1. Why is user management needed?

Answer:-

It focuses on managing permissions for access and actions as well as monitoring usage.

##### Assignment level intermediate:

1. Where can we access the user management?

Answer:-

You can access user management on every computer system. Nowadays, it is available in smartphones and tablets too.

1. What are the features of user management?

Answer:-

* Adding/removing user
* Assigning roles
* Permission management
* User listing
* Adaptive authentication

##### Assignment level Advance:

1. Do a practical to create a user from user management.

Answer:-

* Open run menu
* Type lusrmgr.msc and press enter
* Local user and group manager box will open
* Right click on the right panel on an empty are
* Click new user
* Fill in the required user information, including the username and password. You can also set a password policy if needed.
* Your new user is created.

1. Do a practical to change the password of the administrator from the user management tool.

Answer:-

* Open run menu
* Type lusrmgr.msc and press enter
* Local user and group manager box will open
* Right click on the user whose password you want to change and select set password.
* Click proceed to continue your operation
* Type and confirm your new password and click ok.

#### Topic: File and Folder Permission

##### Assignment Level Basic:

1. What is file folder permission?

Answer:-

  File Folder permissions control what user is permitted to perform which actions on a file or a folder.

1. What is the use of file and folder permission?

Answer:-

It promotes security and keeps data easily accessible for future use.

##### Assignment level Intermediate:

1. wirte down the steps to give a folder read only permission.

Answer:-

1. Access the Properties dialog box.
2. Select the Security tab. ...
3. Click Edit.
4. In the Group or user name section, select the users you wish to set permissions for.
5. In the Permissions section, tick the checkbox which allows read only.
6. Click Apply.
7. Click Okay
8. Write a step to give a file only admin permission.

Answer:-

1. Access the Properties dialog box.
2. Select the Security tab. ...
3. Click Edit.
4. In the Group or user name section, select the users you wish to set permissions for.
5. Click Apply.
6. Click Okay

##### Assignment level Advance:

1. Do a practical to give the folder permission of read only in network.

Answer:-

1. Access the Properties dialog box.
2. Select the Security tab. ...
3. Click Edit.
4. In the Group or user name section, select the users you wish to set permissions for.
5. In the Permissions section, tick the checkbox which allows read only.
6. Click Apply.
7. Click Okay
8. Do a practical to change the ownership of the folder and the sub folders in it

Answer:-

* Start by logging into the administrator account that controls the file or folder in question. You must be the administrator in charge in order to make any ownership changes.
* Once you've done this, you can navigate to the specific file or folder you'd like to take ownership of.
* You can then right-click on the desired file or folder to open up the next menu.
* From the menu bar that appears, select "Properties" toward the bottom of the list. Click on the "Security" tab to open the "Security" menu.
* select the "Advanced" button.
* Select "Change" icon in the area to the right of the owner's name. Click on this icon. Within the new menu that appears, click the "Advanced" button, that's toward the bottom.
* Click on "Find now." A new menu drops down that lists all users of the computer. Navigate to your own username and click on it. After doing so, select the "OK" button. A new menu appears, and you can again click the "OK" button.
* On the screen, the "Advanced Security Settings" menu returns. In the bottom left area of the menu, click the "Add" button. In the new menu, click on "Select a principal" toward the top. When the new pop-up menu opens, select the "Advanced" option.
* click on the "Find now" button located at in the right area of the menu. A list of all computer users again appears, and you can select your own username. Then click the "OK" button above the list of names. Again click "OK" on the new menu that appears.
* you're returned to the "Permission Entry" menu. This menu outlines all basic permissions. To gain full ownership of the specific file or folder, select the box that says, "Full control." Then select "OK."

#### Topic: Install OS

##### Assignment Level Basic

1. What is OS?

Answer:-

Operating System acts as an interface connecting the computer user to the computer hardware. It is system software that manages computer hardware, software resources, and provides common services for computer programs.

1. What are the types of OS?

Answer:-

* General purpose OS
* Mobile OS
* Embedded OS
* Network OS
* Real-time OS

##### Assignment Level Intermediate

1. Do a practical to create bootable pendrive for kali Linux

Answer:-

* Open rufus software which allows you to make bootable pendrives.
* Mount your USB drive, the computer will detect the drive automatically.
* In boot selection, open select and click on the iso file of kali linux OS.
* Select start, make sure you have backed up your data because this process will erase all the data.
* Wait for the status to fill completely till the file is copied.
* Your pendrive is now booted.

1. Do a practical to create a bootable pendrive for windows 7

Answer:-

* Open rufus software which allows you to make bootable pendrives.
* Mount your USB drive, the computer will detect the drive automatically.
* In boot selection, open select and click on the iso file of windows 7 OS.
* Select start, make sure you have backed up your data because this process will erase all the data.
* Wait for the status to fill completely till the file is copied.
* Your pendrive is now booted.

1. Do pendrive for creating a pendrive for mac os Mojave with unibeast.

Answer:-

* Insert the USB drive
* Open /Applications/Utilities/Disk Utility
* Highlight the USB drive in left column
* Click Erase button​
* For Name: type USB
* For Format: choose Mac OS Extended.
* Click Erase then Done
* Download and run UniBeast​
* Click Continue, Continue, Continue, Continue, Agree​
* At Destination Select, choose USB and click Continue​
* At Select OS Installation screen choose Mojave and click Continue​
* At Bootloader Options screen choose UEFI Boot Mode or Legacy Boot Mode. UEFI Boot Mode is recommended for 7/8/9/100/200/300 Series CustoMac desktops and all UEFI capable systems. Legacy Boot Mode is recommended for 5/6 Series CustoMac desktops and all BIOS based systems.​
* Verify installation options, then click Continue, enter password and click Install
* UniBeast will now create the bootable USB drive. The process will only take about 10 minutes, depending on system and drive speed.
* Drag MultiBeast to your completed USB drive.​

##### Assignment level Advance:

1. Do a practical to install Kali Linux

Answer:-

* Mount the usb drive having kali linux.
* Start the system and press the special keys to go to bios.
* Change the boot priority to usb drive.
* Save changes and exit the bios
* Let the pc boot so that you can access the new OS.

1. Do a practical to install windows 10

Answer:-

• Mount the usb drive having windows 10.

• Start the system and press the special keys to go to bios.

• Change the boot priority to usb drive.

• Save changes and exit the bios

• Let the pc boot so that you can access the new OS.

1. Do a practical to install Mac os X.

Answer:-

* Mount the usb having mac os X.
* Press option key + power button to start the pc. Keep holding the option key after pressing the power button.
* You can see mac os x option on the screen, make sure you are not connected to wifi.
* Mac os x utilities box will appear, choose reinstall.
* Agree with the terms and conditions and continue the setup process.
* Your OS is installed.

#### Topic: Clean Install

##### Assignment Level Basic

* 1. What is clean install?

Answer:-

A clean install is an installation of an operating system on a computer where the hard drive is formatted and completely erased.

##### Assignment Level Intermediate

1. What is the process for clean install?

Answer:-

* Firstly, clear the data of the drive in which the OS will be installed. Or backup the data in any other drive.
* Mount the install media of the OS(DVD or flashdrive).
* Click install button. Set up the OS by agreeing with the terms and conditions and selecting the drive.
* Your OS is installed.

1. what are the benefits of clean install?

Answer:-

A clean installation helps declutter the computer, frees up space, and eliminates performance and speed issues. It also helps remove viruses, Trojans, malware and bloatware from the system, and eliminates system problems like blue screen errors.

##### Assignment level Advance:

1. Do a clean installation of windows XP

Answer:-

* Insert Your Windows XP Bootable Disk
* Boot the pc and press f12 key again and again, this will take you to the boot options menu.
* Begin the set up process by pressing the enter key.
* Press F8 to agree with the terms and conditions, and then press esc key so that the program doesn’t repair the current installation.
* Delete the partition of the hard drive.
* Press enter to install the OS on the unpartitioned space.
* Select the method of installation to be standard,and press enter.
* Choose the keyboard layout, organization and computers name.
* Choose your time zone.
* Continue the rest of the process of installation
* Give a user to your computer.
* Your OS is installed.

1. Do a clean installation of windows 8

Answer:-

* Insert the Windows 8 DVD into your optical drive and restart your computer.
* Open the bios while the pc is booting up.
* Select Language to install, Time and currency format, and Keyboard or input method and select Next.
* Select Install Now.
* The Product Key screen appears.
* Locate your Product Key and type it into the box provided, then click Next to continue.
* Accept the license terms described in the License Terms screen. Click the checkbox at the bottom of the screen to accept and click Accept to continue.
* At the “Which Type of Installation do you Want” screen, select Custom: Install Windows only (advanced).

* At “Where do you want to Install Windows?” screen, select Drive options (advanced). Remember that the next step will delete all existing information about your computer so be sure to back up what you want to keep. For a clean installation, delete all partitions that are shown by highlighting them one at a time and selecting Delete. After you have deleted all partitions, select Unallocated Space and then select New. Click Apply to create your new Windows 8 partitions, then click Next.
* A fresh installation of Windows is loaded on your computer.
* Your computer restarts several times. This may take some time to complete installation.

#### Topic: Upgrade installation

##### Assignment level basic

1. What is upgrade installation?

Answer:-

An upgrade installation is a process of installing a newer version of the operating system to replace the existing version. This process involves uninstalling the existing version and then installing the new version in its place, while preserving some of the user's existing files and settings.

1. What is the benefit of upgrade installation?

Answer:-

* Improved security. All software is prone to bugs, and operating systems are no exception.
* Access latest features.
* Better compatibility.
* Boosted device performance.
* Reduced costs.
* Vendor support.
* Increased productivity and efficiency.

##### Assignment level intermediate:

1.Write down the steps of upgrade installation.

Answer:-

* Download the file of the OS from the website of the OS you want to upgrade.
* Make sure you select “upgrade this Pc” option.
* Enter your product key and click next until the process is ready to install.
* Click on install to start installation.

##### Assignment level advance.

* 1. Do a practical to upgrade from windows 8 to windows 10.

Answer:-

• Download the file of the windows 10 OS from the website of Microsoft.

• Make sure you select “upgrade this Pc” option.

• Enter your product key and click next until the process is ready to install.

• Click on install to start installation.

* Windows 10 will get updated on your pc.

#### Topic: Partition & Formatting

##### Assignment level Basic

1. What is partitioning?

Answer:-

It is the process of creating divisions in hard drive to manage data and storage reliably and efficiently.

1. What is partition?

Answer:-

A partition is a logical division of a hard disk that is treated as a separate unit by operating systems (OSes) and file systems.

1. What is format?

Answer:-

The way in which the storage drives arranges or sets data.

##### Assignment level Intermediate:

1. Do a Practical of mbr partition.

Answer:-

• Back up or move the data on the GPT disk prior to conversion.

• Delete all partitions and volumes on the GPT disk.

• For each partition or volume, select and hold (or right-click) the item, and select Delete Partition or Delete Volume.

* Select and hold (or right-click) the GPT disk to convert to the MBR format, and select Convert to MBR Disk.

1. Do a Practical of gpt partition

Answer:-

* Back up or move the data on the MBR disk prior to conversion.
* Delete all partitions and volumes on the MBR disk.
* For each partition or volume, select and hold (or right-click) the item, and select Delete Partition or Delete Volume.
* Select and hold (or right-click) the MBR disk to convert to the GPT format, and select Convert to GPT Disk.

##### Assignment level Advance:

1. Do a practical using cmd.

Answer:-

• Open Command Prompt as an administrator and type diskpart.

• Type list disk and press Enter.

• Type select disk 1 if 1 is the GPT disk.

• Type clean and press Enter.

• Type convert MBR and press Enter.

• Type exit to close Command Prompt after it's done.

1. covert a partition to gpt by cmd.

Answer:-

* Open an elevated command prompt: select and hold (or right-click) Command Prompt, and select Run as Administrator.
* At the prompt, enter diskpart to initiate the disk partition process.
* At the DISKPART prompt, enter list disk. Make a note of the MBR disk number that you want to convert to GPT format.
* At the DISKPART prompt, enter select disk <disk-number>, where <disk-number> is the MBR disk number to convert.
* At the DISKPART prompt, enter clean to delete all partitions and volumes on the disk.
* At the DISKPART prompt, enter convert gpt to convert the MBR disk to the GPT partition format.

1. Format a partition using cmd.

Answer:-

* Open Command Prompt As Administrator
* Use Diskpart
* Type List Disk
* Select the Drive to Format
* Clean the disk
* Create Partition Primary
* Format the drive with FAT or NTFS file system.

#### Topic: Transferring Files

##### Assignment level Basic

1. What is transferring Files?

Answer:-

File transfer is the process of copying or moving a file from one computer to another over a network or internet connection. It enables sharing, transferring or transmitting a file or a logical data object between different users and/or computers both locally and remotely.

1. What are the ways of transferring files?

Answer:-

Transferring files can be done in a variety of ways, including using cloud services, email, USB drives, and peer-to-peer networks.

##### Assignment level Intermediate:

1. How do we transfer files from one system to another?

Answer:-

There are variety of ways through which you can transfer files. The simplest way to transfer files between two computers is by using USB drives or external hard disks. All you have to do is plug the drive into one computer and copy the file onto it. Then unplug it and plug it into the other computer and paste (or drag and drop) it into that computer's storage.

1. Types of file transferring media.

Answer:-

* Tapes
* floppy disk
* Networks
* dedicated circuits
* flash memory
* Hard drives

##### Assignment level Advanced:

1. Do a practical to transfer files from one system to another via network.

Answer:-

* Right-click (or long-press) a file, and then select Show more options > Give access to > Specific people.
* Select a user on the network to share the file with, or select Everyone to give all network users access to the file.

1. DO a practical to transfer data from one hard disk to another.

Answer:-

* Select the files you want to transfer from the old hard drive and copy them.
* Paste the files onto the new hard drive.

#### Topic: Administrative tools

##### Assignment Level Basic

1. What are administrative tools?

Answer:-

Administrative Tools is the collective name for several advanced tools in Windows that are used mainly by system administrators.

1. What is the use of administrative tools?

Answer:-

The programs can be used to schedule a test of your computer's memory, manage advanced aspects of users and groups, format hard drives, configure Windows services, change how the operating system starts, and much, much more.

##### Assignment level Intermediate:

1. List out the administrative tools.

Answer:-

* Autoplay
* Credential manager
* Device encryption
* Ease of access center
* Fonts
* Java
* Network and sharing center
* Programs and features
* Remoteapp and desktop connections
* Speech recognition
* System
* User accounts
* Windows tools
* Backup and restore
* Date and time
* Device manager
* File explorer options
* Indexing options
* Keyboard
* Phone and modem
* Recovery
* Security and maintenance
* Storage spaces
* Taskbar and navigation
* Windows defender firewall
* Work folders
* Color management
* Default programs
* Devices and printers
* File history
* Internet options
* Mouse
* Power options
* Region
* Sound
* Sync center
* Troubleshooting
* Windows mobility center

1. What is disk management tools.

Answer:-

Disk management tools are utility software that is used to manage data on disk by performing various functions on it. Moreover, they perform functions like partitioning devices, manage drives, disk checking, disk formatting, etc.

##### Assignment Level Advanced

1. Do a practical to delete a driver and reinstall it from administrative tools.

Answer:-

**DELETEING A DRIVER**

* Go to control panel.
* Click on device manager
* Select disk drives
* Right click the drive you want to uninstall
* Select uninstall device

**REINSTALL A DRIVER**

* In the search box on the taskbar, enter device manager, then select Device Manager.
* Right-click (or press and hold) the name of the device, and then select Uninstall.
* Then click Action > Scan for hardware changes to reinstall the driver for the device.
* Restart your PC.
* Windows will attempt to reinstall the driver.

1. Do a practical to delete a partition and again create it with administrative tool

Answer:-

**DELETING A PARTITION**

* Open Computer Management by selecting the Start button. The select Control Panel > System and Security > Administrative Tools, and then double-click Computer Management.
* In the left pane, under Storage, select Disk Management.
* Right-click the volume that you want to format, and then select Format.
* To format the volume with the default settings, in the Format dialog box, select OK, and then select OK again.

**CREATING A PARTITION**

* Open Computer Management by selecting the Start button. The select Control Panel > System and Security > Administrative Tools, and then double-click Computer Management.
* In the left pane, under Storage, select Disk Management.
* Right-click an unallocated region on your hard disk, and then select New Simple Volume.
* In the New Simple Volume Wizard, select Next.
* Enter the size of the volume you want to create in megabytes (MB) or accept the maximum default size, and then select Next.
* Accept the default drive letter or choose a different drive letter to identify the partition, and then select Next.
* In the Format Partition dialog box, do one of the following:
* If you don't want to format the volume right now, select Do not format this volume, and then select Next.
* To format the volume with the default settings, select Next.
* Review your choices, and then select Finish.

1. Do a practical to create user with administrative tool.

Answer:-

* Go to Windows Start > Control Panel >Administrative Tools > Computer Management.
* The Computer Management window opens.
* Expand Local Users and Groups.
* Right-click the Users folder and select New User.
* Fill in the required user information, including the username and password. You can also set a password policy if needed.

#### Topic: Windows Feature.

##### Assignment Level Base

* 1. What is windows features?

Answer:-

Prominent facilities provided by Microsoft on the windows operating system which allows user to smoothly work on it.

##### Assignment level Intermediate

1. List out the windows features.

Answer:-

* Start menu
* Task manager
* Task bar
* Microsoft edge(browser)
* Ms paint
* Cortana(assistant)

1. What is the use of IIS?

Answer:-

Internet Information Services, also known as IIS, is a Microsoft web server that runs on Windows operating system and is used to exchange static and dynamic web content with internet users.

##### Assignment level Advance:

1. Do a practical to re install IIS with windows feature.

Answer:-

* Go to control panel.
* Select programs and features
* Select “windows feature turn on or off”
* Select IIS checkbox
* Click OK

1. Do a practical to install dotnet framework 3.5 with Windows feature.

Answer:-

* Go to control panel.
* Select programs and features
* Select “windows feature turn on or off”
* Select .Net framework 3.5 checkbox
* Click OK.

1. Do a practical to disable internet explorer in windows feature.

Answer:-

* Select Start > Settings.
* Select Apps.
* Select Optional features.
* In the list of installed features, find Internet Explorer 11, select it
* then select Uninstall.

#### Topic: Backup & Restore

##### Assignment level Basic:

1. What is backup?

Answer:-

Backup refers to the copying of physical or virtual files or databases to a secondary location for preservation in case of equipment failure or catastrophe.

1. What is Restore?

Answer:-

Restore is to retrieve the system back to its original form after a certain kind of loss, mostly the term is used for data. Data can be lost due to many reasons and we can restore all the lost information by regular backup.

1. What is the need of backup

Answer:-

Backups protect against human errors, hardware failure, virus attacks, power failure, and natural disasters. Backups can help save time and money if these failures occur.

##### Assignment level Intermediate.

1. What are the tools of backup?

Answer:-

* Windows backup
* Backup and restore(administrative tool)

1. How do we restore?

Answer:-

To restore, we need to create a restore point on our system.

1. How to create a restore point?

Answer:-

• In the search box on the taskbar, type Create a restore point, and select it from the list of results.

• On the System Protection tab in System Properties, select Create.

• Type a description for the restore point, and then select Create.

##### Assignment level Advance:

1. Do a practical to create restore point.

Answer:-

• In the search box on the taskbar, type Create a restore point, and select it from the list of results.

• On the System Protection tab in System Properties, select Create.

• Type a description for the restore point, and then select Create.

1. Do a practical to restore from restore point.

Answer:-

* In the search box on the taskbar, type control panel, and then choose it from the list of results
* In the Control Panel search box, type recovery.
* Select Recovery > Open System Restore.
* In the Restore system files and settings box, select Next.
* Select the restore point that you want to use in the list of results, and then select Scan for affected programs.
* You'll see a list of items that will be deleted if you remove this restore point. If you're OK with the deletions, select Close > Next > Finish.

1. Do a practical to take backup from another system

Answer:-

There are several ways but we will do a practical using an external hard drive

* Connect the hard drive with the PC you want to backup.
* Transfer all the data that you want to backup in this hard drive.
* Unmount the drive and mount it to another system.
* Now, transfer the data from the hard drive to your computer.

1. Do a practical to take backup backup with a recuva backup tool.

Answer:-

* Go to "Control Panel" → "System and Security" → Backup and Restore
* Select "Set up backup" under the "Backup" section
* If asked, enter your admin passcode
* Select "Backup Drive" → click "Next"
* Select "Let Windows Choose" → click "Next" (this will back up user-associated files)
* Click "Save settings and run backup"

#### Topic: Disk Management

##### Assignment level Basic:

1. What is Disk management?

Answer:-

Disk management in operating systems involves organizing and maintaining the data on a storage device, such as a hard disk drive or solid-state drive.

1. What is the use of disk management?

Answer:-

The main goal of disk management is to efficiently utilize the available storage space and ensure data integrity and security.

1. What are the merits of Disk management tool?

Answer:-

* Improved organization and management of data.
* Efficient use of available storage space.
* Improved data integrity and security.
* Improved performance through techniques such as defragmentation.

##### Assignment level Intermediate:

1. Where can we find the disk management tool?

Answer:-

Right click on the start button and select disk management.

1. List out the operations we can do with disk management tool

Answer:-

Here are some tasks you can complete with Disk Management:

* Initialize new disks
* Extend a basic volume
* Shrink a basic volume
* Change a driver letter

##### Assignment level Advance:

1. Do a practical to create a new partition with disk management tool.

Answer:-

* Right-click This PC and select Manage.
* Open Disk Management.
* Select the disk from which you want to make a partition.
* Right-click the Unpartitioned space in the bottom pane and select New Simple Volume.
* Enter the size and click next, and you are done.

1. Do a practical to convert from MBR to gpt from disk management tool

Answer:-

* Right click ‘this PC’ and select manage.
* Select disk management from the storage folder.
* Right click on the volume of the disk you want to convert.
* Select delete volume, make sure you have backed up data from this partition.
* Right click on the disk, select “convert to gpt disk”.

1. Do a practical to create new partition from existing partition.

Answer:-

* Right click ‘this PC’ and select manage.
* Select disk management from the storage folder.
* Go to the volume of the disk you want to partition.
* Right click and select “shrink volume”
* Type the new value and shrink the partition of the volume.
* A new partition is created as unallocated space.
* Right click on it and select “new simple volume”.
* New partition is created.

#### Topic: Device Management

##### Assignment level Basic:

1. What is Device Management?

Answer:-

Device management in an operating system means controlling the Input/Output devices like disk, microphone, keyboard, printer, magnetic tape, USB ports, camcorder, scanner, other accessories, and supporting units like supporting units control channels.

1. What is the need of device management?

Answer:-

Device management enables organizations to administer and maintain devices

1. What are the benefits of Device management?

Answer:-

* The toolset to manage devices, including the ability to deploy and update software, configure settings, enforce policies, and monitor with data and reports
* The ability to administer and manage virtual and physical devices, regardless of their physical location
* Maintain a network of devices running common operating systems, including Windows, Linux, and Android.
* Automate policy management and deployment for apps, device features, security, and compliance
* Optimize device features for business use
* Provide a single point of management for devices, including the ability to manage devices from a central console
* Secure and protect data on devices, including safeguards and measures to prevent unauthorized access

##### Assignment level Intermediate:

1. Where can we access device management?

Answer:-

You can right click on the windows button and select device manager to access device management on your PC.

1. List out the devices connected to the device management.

Answer:-

The devices connected to the device management are

* Input devices
* Output devices
* Processors
* Usb controllers
* Disk drives

And many more…

##### Assignment level Advance:

1. Do a practical to add a device with device management tool.

Answer:-

* Right-click on Start , then select Device Manager.
* Select a device category, then right-click the one you like to update.
* Select Update driver, then click Search automatically for drivers.
* Add the driver you want.

1. Do a practical to delete a driver from the device management tool.

Answer:-

• Go to control panel.

• Click on device manager

• Select disk drives

• Right click the drive you want to uninstall

• Select uninstall device

#### Topic: Physical security

##### Assignment Level Basic

1. Why physical security needed?

Answer:-

Physical security's main objective is to protect the assets and facilities of the organization. So the foremost responsibility of physical security is to safeguard employees since they are an important asset to the company.

1. what is physical security?

Answer:-

Physical security is the protection of personnel, hardware, software, networks and data from physical actions and events that could cause serious loss or damage to an enterprise, agency or institution.

##### Assignment Level Intermediate

1. list out the ways of physical security.

Answer:-

There are several ways to protect your system physically from damages some of them are as follows.

* Locking the system with physical locks and key should be with someone trustworthy.
* Keeping a hardware inventory record which makes audit easy.
* Lock laptops with a laptop lock.

1. How to protect system from malfunctioning due to electrical fluctuation?

Answer:-

Here are some ways to protect your system from electrical fluctuation:

* Use a surge protector: Surge protectors are devices with one or more outlets that you can use to protect electronic devices from power surges. They work by diverting excess voltage to the ground, preventing it from reaching your electronics.
* Use uninterruptible power supplies (UPS):
* Install surge protective devices (SPDs):
* Ensure proper grounding
* Disconnect during storms
* Manage your outlets strategically: Don't plug too many devices into a single outlet.
* Unplug your computer: If there are problems with the wiring, the only way to prevent further damage is by switching off the power supply.

#### Topic: Firewall settings

##### Assignment level basic:

1. What is firewall?

Answer:-

A Firewall is a barrier between two networks identifying and blocking cyber threats while allowing appropriate traffic through.

1. Why is firewall needed?

Answer:-

Firewall is needed to insure security of the network or system in question.

##### Assignment level Intermediate:

1. What are the features of firewall?

Answer:-

* 1. Unified Security Management

1. Threat Prevention
2. Application and Identity-Based Inspection
3. Hybrid Cloud Support
4. Scalable Performance
5. Describe types of firewall

Answer:-

• Firewalls types:

1. Hardware Firewalls

2. Server Firewalls

3. Personal Firewalls

##### Assignment level advance:

1. Do a practical to allow anydesk through firewall.

Answer:-

* open Settings, go to Privacy & Security, and visit Windows Security.
* Here, you will find Firewall & network protection.
* Now tap on Allow an app through the firewall and go to Change settings and select Allow another app.
* Now, locate AnyDesk and check the Private and Public boxes.

1. do a practical to turn off the services of firewall.

Answer:-

* Select System and Security.
* Click Windows Defender Firewall.
* Click the Turn Windows Defender Firewall on or off option.
* Click the Turn off Windows Defender Firewall (not recommended) radio buttons under the Private network settings and Public network settings. Click OK.

1. Do a practical to block ip messenger to access the network.

Answer:-

* Open windows defender firewall in the control panel.
* Click on advanced settings.
* Select inbound rules and then click on new rule.
* Under rule type, select custom and click next.
* Under Program, select All Programs and click Next.
* Under Program, select All Programs and click Next.
* In the dialogue box, under "Which Remote IP addresses does this rule apply to?" select, These IP Addresses, then add an IP address or a range and click Next.
* Select Block the Connection and click Next.
* Tick the checkboxes of Domain, Private and Public and click Next.
* Enter a name for your rule and click Finish.

