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

Topic: User Management

• Assignment Level Basic

1.What is user management?

Ans. User management involves the administration and control of user accounts, permissions, and access within a system or network.

2.Why is user management needed?

Ans. User management is essential for ensuring secure and organized control over user access, permissions, and authentication, thereby safeguarding system integrity and data confidentiality.

• Assignment level intermediate:

1.Where can we access the user management?

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

2. What are the features of user management?

Ans. End-to-end login process--convenient, secure login interface, supporting multiple login options.

• Assignment level Advance:

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

Ans. Done

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

Ans. Done

Topic: File and Folder Permission

• Assignment Level Basic:

1. What is file folder permission?

Ans. File and folder permissions define access rights granted to users or groups, regulating their ability to read, write, or execute files and directories within a computer system.

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

Ans. you specify what users are allowed to do within that folder, such as save and delete files or create a new folder.

• Assignment level Intermediate:

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

Ans. In the "Group or user names" section, select the user or group for which you want to set read-only permissions, then check the "Read" box in the "Allow" column.

2.Write a step to give a file only admin permission.

Ans. right- click on program files. Select properties then the security tab. Select administrators or your account.

• Assignment level Advance:

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

Ans. Done

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2.Do a practical to change the ownership of the folder and the sub folders in it.

Ans. Done

Topic: Install OS

• Assignment Level Basic

1.What is OS?

Ans. an operating system OS is software that manages computer hardware and provides a platform for running applications.

2.What are the types of OS?

Ans. single user, single- tasking OS, single-user, multi-tasking OS, multi-user OS, real-timeOS, embedded OS.

• Assignment Level Intermediate

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

Ans. Done.

2.Do a practical to create a bootable PENDRIVE for windows 7

Ans. Done.

3.Do PENDRIVE for creating a PENDRIVE for MAC OS Mojave with UNIBEAST.

Ans. Done.

• Assignment level Advance:

1. Do a practical to install Kali Linux

Ans. Done

2.Do a practical to install windows 10

Ans. Done

3.Do a practical to install Mac OS X

Ans. Done

Topic: Clean Install

• Assignment Level Basic

1 What is clean install?

Ans. 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

Ans. Performing a clean install involves booting from installation media, formatting the storage drive, and installing the operating system with a fresh configuration.

2.what are the benefits of clean install?

Ans. A clean install enables users to regain control over the system by eliminating programs and files that have not been used for a long time, if ever.

• Assignment level Advance:

1. Do a clean installation of windows XP

Ans. Done.

2.Do a clean installation of windows 8

Ans. Done.

Topic: Upgrade installation

• Assignment level basic

1.What is upgrade installation?

Ans. An upgrade installation is a process of installing a newer version of the Windows operating system to replace the existing version.

2.What is the benefit of upgrade installation?

Ans. Upgrade installations enhance software by providing new features, improved performance, and security updates, ensuring users have the latest and most efficient version.

• Assignment level advance.

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

Ans. Done.

Topic: Partition & Formatting

• Assignment level Basic

1.What is partitioning?

Ans. Partitioning is the process of dividing a storage device into multiple logical sections, allowing for better organization and management of data.

2.What is partition?

Ans. A partition is a distinct, isolated section of a storage device that functions as a separate unit, enabling the organization and management of data on a computer.

3.What is format?

Ans. Formatting is the process of preparing a storage medium, such as a disk or memory card, by creating a file system to store and organize data.

• Assignment level Intermediate:

1.Do a Practical of MBR partition.

Ans. Done

2.Do a Practical of GPT partition

Ans. Done

• Assignment level Advance:

1. Do a practical using cmd.

Ans. Done.

2.covert a partition to GPT by cmd.

Ans. To convert a partition to GPT using CMD, use the command "convert GPT" in DISKPART after selecting the target partition.

3.Format a partition using cmd.

Ans. To format a partition using CMD, open Command Prompt, type "format [drive letter]: /FS:[file system]" (e.g., "format D: /FS:NTFS"), and press Enter; confirm the action when prompted, and the partition will be formatted with the specified file system.

Topic: Transferring Files

• Assignment level Basic

1.What is transferring Files?

Ans. “File transfer is the process of copying or moving the exchange of data files between computer systems..

2. What are the ways of transferring files?

Ans. Files can be transferred through methods like USB transfers, network file sharing, cloud storage services, email attachments, and Bluetooth connections.

• Assignment level Intermediate:

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

Ans. Files can be transferred from one system to another using various methods, such as copying to a USB drive, utilizing network file sharing protocols, employing cloud storage services, or establishing a direct cable connection between the systems.

2.Types of file transferring media.

Ans. **USB Drives, Network File Sharing, Cloud Storage, Direct Cable Connection.**

• Assignment level Advanced:

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

Ans. Done

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

Ans. Done

Topic: Administrative tools

• Assignment Level Basic

1.What are administrative tools?

Ans. system management, configuration, and troubleshooting, typically used by system administrators for maintaining and controlling computer resources.

2. What is the use of administrative tools?

Ans. Administrative tools help an organization manage its resources, including human resources, finances, and information technology (IT).

• Assignment level Intermediate:

1. List out the administrative tools.

Ans. Task Manager, Disk Management, Device Manager, Event Viewer, Computer Management, Services, Local Users and Groups, Group Policy Editor, Registry Editor, System Configuration.

2. What is disk management tools.

Ans. Disk Management is a system utility in Windows that allows users to view and manage the storage devices connected to their computer, enabling tasks such as partition creation, formatting, and assigning drive letters.

• Assignment Level Advanced

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

Ans. Done

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

Ans. Done

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

Ans. Done

Topic: Windows Feature.

• Assignment Level Base

1.What is windows features?

Ans. Windows features refer to the functionalities and components integrated into the Microsoft Windows operating system, enhancing its capabilities and providing diverse tools for users.

• Assignment level Intermediate

1. List out the windows features.

Ans. start menu, task manager, taskbar, CORTANA, file explorer, MS Paint, Browser, control panel.

2. What is the use of IIS?

Ans. Internet Information Services is a web server software developed by Microsoft, primarily used to host and manage websites, web applications, and services on Windows servers.

• Assignment level Advance:

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

Ans. Done

2. Do a practical to install DOTNET framework 3.5 with Windows feature.

Ans. Done

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

Ans. Done

Topic: Backup & Restore

• Assignment level Basic:

1.What is backup?

Ans.  The process of backing up data is pivotal to a successful disaster recovery plan.

2. What is Restore?

Ans. Restore is the process of returning a system, file, or data to its previous state or condition, often used to recover from errors, system failures, or unwanted changes.

3. What is the need of backup

Ans. Backups protect against human errors, hardware failure, virus attacks, power failure, and natural disasters.

• Assignment level Intermediate.

1. What are the tools of backup?

Ans. Backup tools include solutions like ACRONIS True Image, VEEAM Backup, and Windows Backup, which facilitate the copying and archiving of data to prevent loss in case of system failures or data corruption.

2.How do we restore?

Ans. 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.

3. How to create a restore point?

Ans. To create a restore point in Windows, go to "Control Panel," then "System," choose "System Protection," select the drive, and click "Create" to set a restore point for your system.

• Assignment level Advance:

1. Do a practical to create restore point.

Ans. Done

2.Do a practical to restore from restore point.

Ans. Done

3.Do a practical to take backup from another system.

Ans. Done

4. Do a practical to take backup BACKUP with a RECUVA backup tool.

Ans. Done

Topic: Disk Management

• Assignment level Basic:

1.What is Disk management?

Ans. Disk Management is a Windows utility that allows users to view, create, format, and manage disk partitions on their computer's hard drives.

2. What is the use of disk management?

Ans. Disk management is the process of organizing and maintaining the storage on a computer's hard disk.

3. What are the merits of Disk management tool?

Ans. Disk Management in Windows helps you perform advanced storage tasks like initializing a new drive and extending or shrinking volumes.

• Assignment level Intermediate:

1.Where can we find the disk management tool?

Ans. The Disk Management tool can be found in the Windows operating system by right-clicking on the Start button, selecting "Disk Management" from the context menu.

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

Ans. Set up a new drive, Extend a volume into space that's not already part of a volume on the same drive, Shrink a partition, such as to enable extending into a neighboring partition, Change a drive letter or assign a new drive letter.

• Assignment level Advance:

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

Ans. Done

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

Ans. Done

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

Ans. Done

Topic: Device Management

• Assignment level Basic:

1.What is Device Management?

Ans. Device Management involves overseeing and controlling computer hardware components, ensuring proper installation, configuration, and maintenance of devices such as printers, graphics cards, and storage devices.

2. What is the need of device management?

Ans. Device management enables organizations to administer and maintain devices, including virtual machines, physical computers, mobile devices, and IOT devices. Device management is a critical component of any organization's security strategy.

3. What are the benefits of Device management?

Ans. Device management streamlines hardware operations, enhances system reliability, and optimizes resource utilization, leading to improved efficiency, reduced downtime, and simplified troubleshooting in IT environments.

• Assignment level Intermediate:

1. Where can we access device management?

Ans. Device Manager can be accessed in Windows by right-clicking on the Start button, selecting "Device Manager" from the context menu, providing a centralized interface to manage and troubleshoot hardware devices.

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

Ans. Device management enables organizations to administer and maintain devices, including virtual machines, physical computers, mobile devices, and IOT devices.

•Assignment level Advance:

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

Ans. Done

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

Ans. Done

Topic: Physical security

• Assignment Level Basic

1. Why physical security needed?

Ans. There are a variety of threats to your network, and physical attacks are among the most serious potential challenges you can face (EC-Council, 2022).

2.what is physical security?

Ans. Physical security involves safeguarding tangible assets, facilities, and personnel through measures such as access control, surveillance, and environmental controls to prevent unauthorized access, damage, or theft

• Assignment Level Intermediate

1. list out the ways of physical security.

Ans. Protect the Perimeter. ...

Control Access to the Facility. ...

Monitor the Entire Site. ...

Provide Security at the Cabinet Level.

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

Ans. Voltage stabilizers are devices that can help regulate the voltage in your home, thus preventing power surges from occurring. These devices work by stabilizing the voltage fluctuations in your home's electrical system, ensuring that your electronic devices are not exposed to sudden surges.

Topic: Firewall settings

• Assignment level basic

1.What is firewall?

Ans. A firewall is a network security device that monitors incoming and outgoing network traffic and decides whether to allow or block specific traffic based on a defined set of security rules.

2. Why is firewall needed?

Ans. A firewall is needed to enhance network security by regulating and monitoring incoming and outgoing traffic, preventing unauthorized access, and protecting against cyber threats and attacks

• Assignment level Intermediate:

1. What are the features of firewall?

Ans. Firewall features include packet filtering, STATEFUL inspection, proxy services, network address translation (NAT), and application-layer filtering, providing a comprehensive defense against unauthorized access and cyber threats.

2.Describe types of firewall

Ans. Types of Firewalls. A firewall can either be software or hardware. Software firewalls are programs installed on each computer, and they regulate network traffic through applications and port numbers. Meanwhile, hardware firewalls are the equipment established between the gateway and your network.

• Assignment level advance:

* 1. Do a practical to allow ANYDESK through firewall.

Ans. Done

* 1. Do a practical to turn off the services of firewall

ans. Done

3.Do a practical to block IP messenger to access the network.

Ans. Done