1. i) A host is a sender or receiver end node of a communication channel.

ii) A router is a hardware device used in networking to connect a local network to the internet.

iii) An operating system is a computer software that manages the hardware components, computer memory and processes as well as the application software.

iv) Bandwidth is the maximum amount of information that can be transferred over the internet in a specific period.

v)Throughput is the measure of the amount of information a system can process in each period.

vi) IT infrastructure is the basis on which an organization’s mission systems are built. It comprises off the systems, software, and equipment essential to all departments of the organization for its smooth running.

1. The core responsibility of a systems administrator is to maintain computer systems. This involves the requirement to install, configure and update computer systems as well as optimize systems availability, efficiency, security, and performance.
2. In the boot process of a computer, the hardware is tested by the system and the system loads the operating system and configures all devices. After all devices are configured, the software required for the operation of the system are initialized and finally, file systems are mounted and the computer is ready for use (IBM, n.d.).
3. I will purchase laptops with fastest processing and large storage. The laptops will have Core i9 processors since this processor performs faster than most processing chips and RAMs larger than 8GB as well as large SSD capacity to store large units of information since the organization works with vital information.
4. Some core principles of a system administrator include:

Having secure accounts and passwords

Ensuring user privacy, and

Ensuring users experience essential system updates.

1. A number of changes have influenced the advancement of IT infrastructure, and Moore’s law is one of them. Moore's Law, which states that the power of microprocessors doubles every 18 months and the cost of computing decreases in half, deals with the significant increase in processing power and decline in the cost of computing technology. Also, the Law of Mass Digital Storage, which states that the amount of kilobytes of data that can be stored on magnetic media for $1 nearly doubles every 15 months, this results in the exponential decrease in the cost of data storage. The fast drop in communication costs and rising agreement in the technology industry to employ computing and communications standards are also driving the surge in computer use.
2. i) PowerShell has some commands that are unavailable on Command Prompt such as the management of registries by system administrators can be revealed using some PowerShell cmdlets but not on Command Prompt.

ii)PowerShell allows object output of one cmdlet to be passed through the input of another cmdlet using pipes while Command Prompt allows only text output and lacks pipes.

iii) PowerShell is a scripting environment and acts like a programming language which can be used to script programs to manage Windows systems. This is easier as compared to Command Prompt.

iv. PowerShell can execute a sequence of cmdlets in a script at once, while Command Prompt addresses one command after the other.

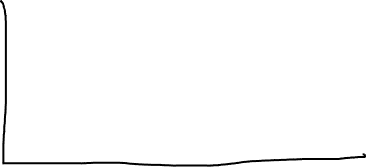
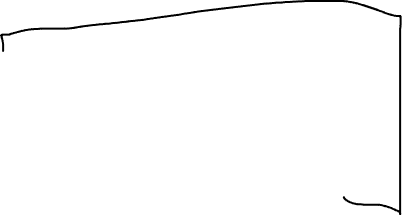
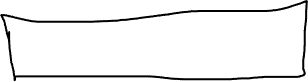
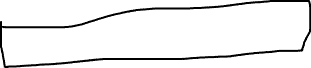
1. The focus of the system is to attract and keep customers. Some environmental issues that must be considered for the system to be successful include finances, shipping and delivery, taxes, and import duties. For the website, the financial or checkout point must have an easy and convenient means of payment for customers such as credit card, PayStack or MasterCard payment options ease of transactions. The website must also have options of various languages to allow customers in various parts of the world understand the content of the website. In terms of shipping, delivery and import duties, a negotiation must be made with firms to support the organization to ease the financial burden on customers. For example, a deal can be made to save customers from paying extremely high import duties or an arrangement can be made with a shipping and delivery company such as DHL to ensure safe and relatively affordable delivery of bought goods.

9.

Receiver subsystem

Amplifier

Surround sound processor



SPEAKER

TV

RECEIVER

DVD PLAYER

SPEAKER

The inputs for the home theatre system are from the DVD player and the receiver. The outputs are the speakers and the TV. The input for the receiver subsystem is the sound processor and the output is the amplifier.