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Q<sup>1</sup> Open Source Software:-

(OSS)

refers to the software which uses the code freely available on the internet. The code can be copied, modified or deleted by other users and organizations. As the software is open to the public, the result is that it constantly updates, improves and expands as more people can work on its improvement.

Application software:-

Application

software are often called productivity programs.

because they enable the user to complete task such as creating documents, spreadsheets, databases and publications.

Open source software Application software.

Lesser hardware managing information costs.

High quality software manipulating data constructing visuals

No vendor lock Coordinating

Lower software resources - cost

Integrated figures

management

simple license

managements

Abundant support

Q<sup>1</sup> Part (b)

Features of system software:-

An important feature of system software are

(1) system software is closer to the system

Generally written in a low-level language.

The system software is difficult to design and understand

Fast in speed

Less interactive

Smaller in size

Hard to manipulate.

Q (a) Operating system:-

Definition:-

An operating system is a program that acts as an interface between the user and the computer hardware and controls the execution of all kinds of programs.

Important functions of operating system

Memory Management

Processor Management

Device Management

File Management

Security

Control over system performance

Error detecting aids.

Coordination between other software and users.

Q<sup>2</sup> (b)

Telnet and FTP :-

Telnet and FTP both use the application layer protocol. They are connection oriented protocols as they create a connection between remote host and a server.

Telnet uses :-

Telnet can be used for a variety of activities on a server including editing files running various programs and checking email. users are also able to connect any software that utilizes text based unencrypted protocols via Telnet from web servers to port.

## Network Protocol:-

That's basically a language a way for machines to talk to one another.

## Interactive:-

That means Telnet basically expect a live user on one end of the line. Telnet is not usually used for computers to talk autonomously with each other but was built from the ground up to be human readable.

## Text oriented:-

Telnet is a text only protocol you won't see graphics or fancy images while working with Telnet nor will you be able to transfer files with Telnet.

## Bidirectional:-

That's means telnet

is, not one way it can be used to send and receive information.

~~File Transfer Protocol~~ File Transfer Protocol uses:-

FTP server:-

The FTP server can support both active and passive connection with the FTP client. In an active FTP connection the client opens a port and listens while the server actively connects it.

FTP client:-

FTP clients were just command line interface application a few decades ago. They now come in easy to use intuitive interfaces to facilitate and simplify file transfers.

### Q<sup>3</sup>(a) Metropolitan Area Network:-

A Metropolitan area Network is similar to a local area network but spans an entire city or campus. MANs are formed by connecting multiple LANs. Thus MANs are larger than LANs but smaller than wide area network.

MANs are extremely efficient and provide fast communication via high-speed carriers, such as fiber optic cables.

The fault tolerance of a MAN is less and also there is more congestion in the network. It is costly and may or may



not be owned by a single organization. The data transfer rate and the Propagation delay of MAN is moderate.  
Example:-

MAN are the part of the telephone company network that can provide a high speed DSL line to the customers.

Q<sup>3</sup> (b)

Topology:-

In networking Topology refers to the layout of a computer network. OR

The pattern of interconnection of nodes in a network is called the Topology.

## Star Topology:-

A star topology is the most common network topology. It is laid out so that every node in the network is directly connected to one central hub via coaxial, twisted pair or fiber optic cable. Acting as a server, this central node manages data transmission as information sent from any node on the network has to pass through the central one to reach its destination and function as a switch which helps prevent data loss. Star topologies are common since they allow you to conveniently manage your entire network from a single location. Because each of the nodes are independently connected to the central hub.

Q4

## Common Media:-

Common media for storage access and transmission of information are

Text

Graphics

Animation

Audio

Video

Multimedia in information technology refers to use of more than one of these media for information presentation to users.

## Text Media:-

Alphanumeric characters are used to present information in text form. Computers are widely used for text processing.

Keyboards OCRs Computer and Printers are some commonly used hardware devices for processing text media.

Computer Graphic Media:-

Computer graphics deals with generation representation manipulation and display of pictures with a computer.

Some desirable features of a multimedia computer system are painting or drawing software screen capture software, clip art graphics importing and software support for high resolution.

## Animation Media:-

Computer Animation deals with generation Sequencing and display of a set of images to create an effect of visual change or motion similar to a movie film.

Animation is commonly used in those instances where videography is not possible or animation can better illustrate the concept than video.

Animation deals with displaying a sequence of images at a reasonable speed to create an impression of movement.