



SUMMER EXAMINATION 2020

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Question #1

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Write a note on multimedia and its types with common media for access and transmission in details?

ANSWER

→ MULTIMEDIA:

↳ The term multimedia constituents of two words, 'multi' and 'media'. 'multi' refers to many i.e. at least two.

Media is the plural of medium.

Medium refers to storage, transmission, communication, representation, presentation, input interaction and perception, meaning that it can refer to different level of abstraction. It also refers to a

Basic information types like, text, graphics, images, audio, animation, video etc, therefore multimedia is an integration of many types of media.

②
→ Types of multimedia:-

↳ The majority of content we are exposed to daily is a product of one or more types of multimedia.

Any information we can get our hands on can be categorised as multimedia. Anything from magazines, television, computers etc.

→ Text:-

↳ Text is seen probably one of the most frequently combined mediums. In the colorful world of media or multimedia, it sorted as a written message you wanted to access to readers and has been one of the key form. of communication.

→ Audio File:-

↳ Audio file are a collection of sound that can be added and combined with all others types of media.

③

→ Image and photographs:-

↳ image and visual representation are probably one of the oldest forms of media that date back to prehistory and time of cave drawing.

→ Video Material:-

↳ Another essential type of multimedia comes in the form of video presentation and material. video is a collection of moving pictures combined with audio.

→ Animation:-

↳ we can say that the place where images and photographs meet video material is where animation begins, one of the most frequent types of Animation seen on the web Today are GIFs.

④
→ Common media for access storage :-

↳ Data storage management, as one of the important functions in database management system, is to manage data on disk in an efficient way.

→ Transmission Access :-

↳ multimedia which combines basic functions with high quality graphics, sound, audio, video, and animation.

⑤

Question # 2

↳ What are the Relation Between hardware and software. And its types of software with logical system Architecture?

ANSWER

→ Relationship Between hardware and software:

↳ Both hardware and software are necessary for computers to do useful job. They complementary to each other.

→ Some hardware can be added or loaded with different software to make a computer system perform different types of job.

→ Except for upgrades, hardware is normally a one time expense, where as software is a continuing expense.

⑥

→ upgrades refers to renewing or changing components like increasing the main memory, or hard disk capacities, or adding speakers, modems, etc.

→ Types of software :-

↳ most software can be divided into two major categories.

→ system software :-

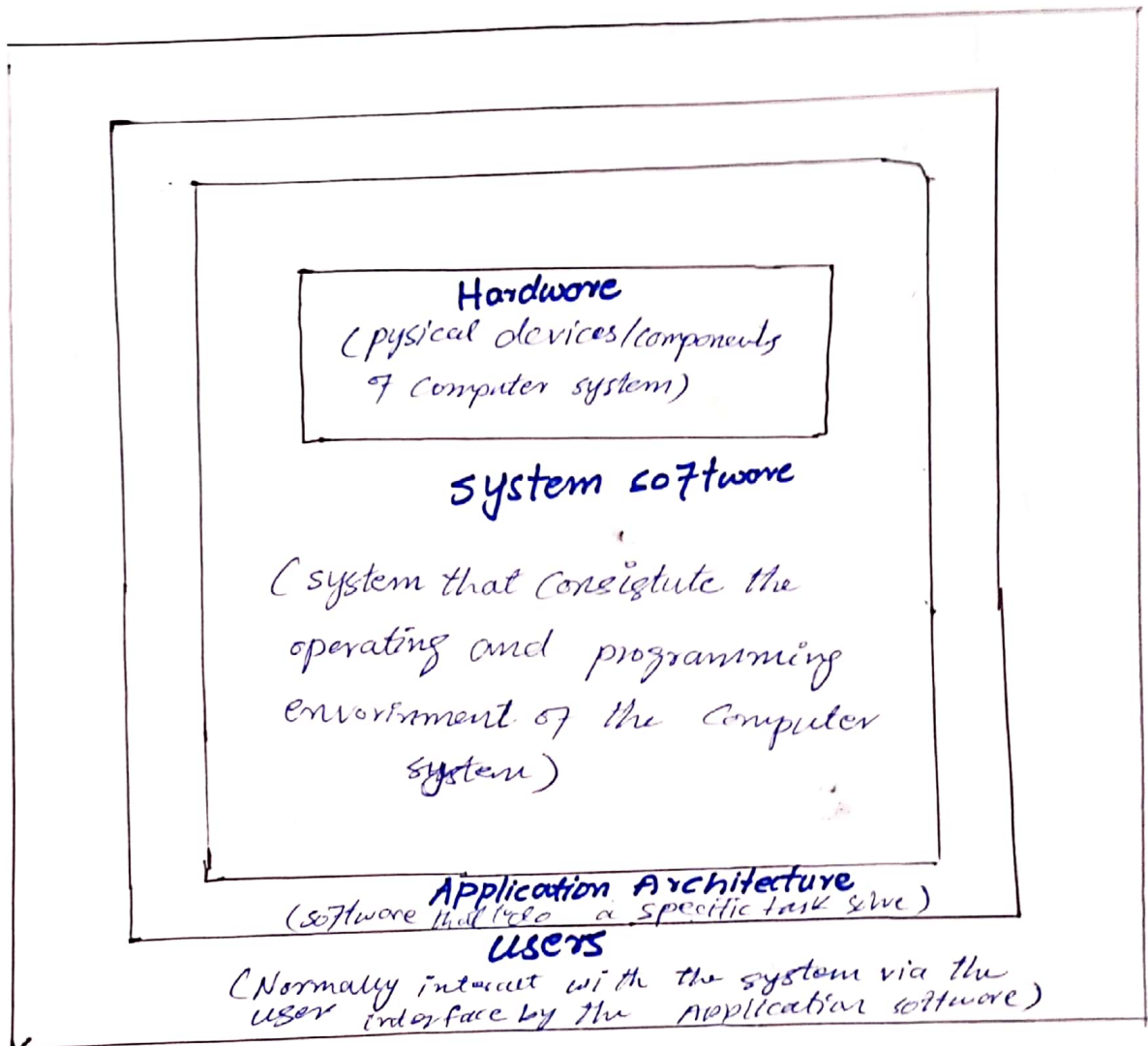
↳ system software are designed to control the operation and extend the processing capability of a computer system.

→ Application software :-

↳ Application software are designed to solve a specific problem or to do a specific task.

⑦

→ Logical system Architecture :-



↳ Relationship among hardware, system, Application Software, and users of a Computer system.

②

Question #3

⇒ Write a note on each of the following?
ANSWER

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a)

↳ Modulation Techniques:-

↳ Modulation Techniques are divided into several types.

⇒ Amplitude Modulation (AM):-

↳ Two Binary values (0 and 1) of a digital data are represented by two different amplitudes of the carrier signal, keeping frequency and phase constant.

⇒ Frequency Modulation (FM):-

↳ Two Binary values of digital data are represented by two different frequencies, while amplitude and phase are kept constant.

⇒ Phase Modulation:-

↳ Two Binary values of digital data are represented by shift in phase carrier signal.

⑨

b) Multiplexing and demultiplexing?

→ Multiplexing:-

↳ Method of dividing physical

channel into many logical channels so that a number of independent signals may be simultaneously transmitted.

→ Electronic device that performs multiplexing is known as a multiplexer.

→ multiplexing enables a signal transmission medium to concurrently transmit data between several transmitters and receivers.

→ Two Basic Method of multiplexing:-

→ Frequency-Division Multiplexing:-

↳ Available Bandwidth of a physical medium is divided into several smaller.

→ Time-Division Multiplexing:-

↳ Total time available in a channel is divided among several users.

⑩ → Demultiplexing:

↳ Demultiplexing is a term relative to multiplexing. It is the reverse of the multiplexing process.

→ Demultiplexing is a process reconverts a signal containing multiple.

→ analog or digital signal streams back into the original separate and unrelated signals.

→ Demultiplexing is the reverse of the multiplexing process, it is not the opposite of multiplexing.

→ Demultiplexing (Demux) is a device that performs the reverse process of multiplexer.

11

c) Switching Techniques :-

↳ Data is often transmitted from source to destination through a network of intermediate nodes.

→ Switching techniques deal with the methods of establishing communication links between the sender and receiver in a communication network.

→ There are commonly used switching techniques :-

→ circuit switching :-

↳ Dedicated physical path is established between sending and receiving stations through nodes of the network for the duration of communication.

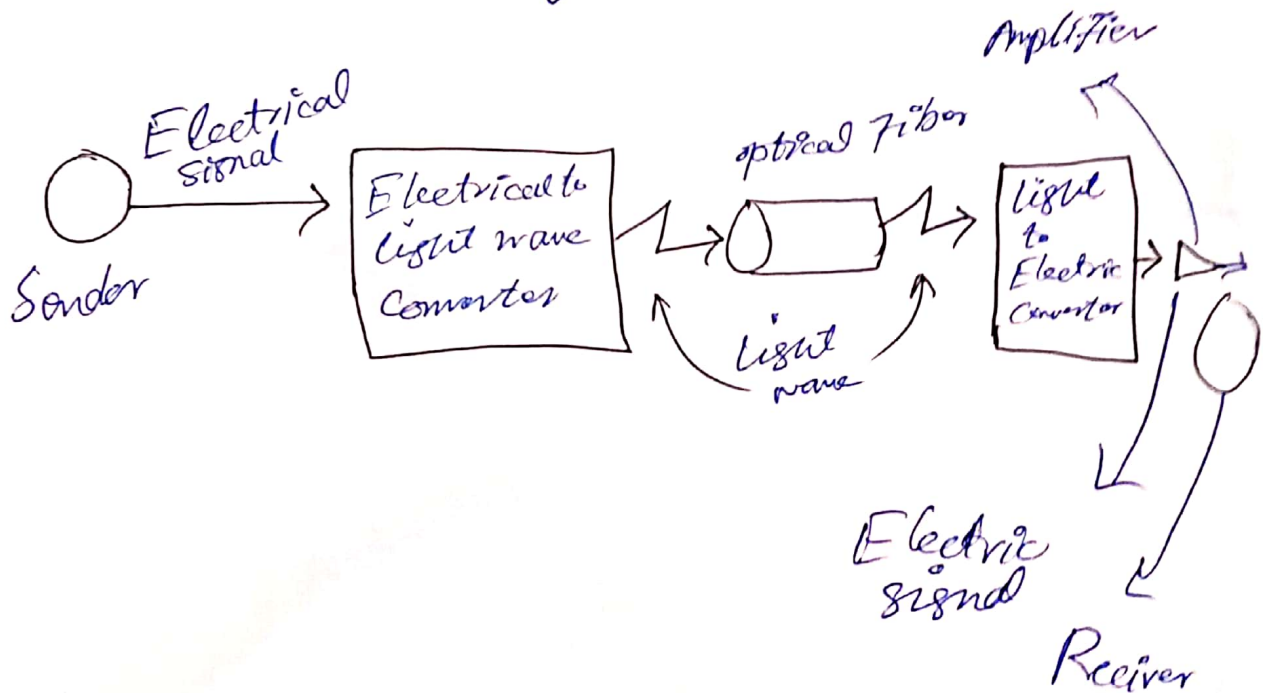
→ Message switching :-

↳ Sender appends receiver's destination address to the message and it.

12

d) Optical Fiber Communication system :-

↳ optical fiber communication is a method of transmitting information from one place to another by sending pulses of infrared light through an optical fiber, the light is form of carrier wave that is modulated carry information.



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Question # 4

↳ What is OSI Model Explain each layer of OSI model?

ANSWER

→ The OSI Model :-

↳ The OSI model is a logical and conceptual model that defines network communication used by system open to interconnection and communication with other systems. The OSI also defines a logical network and effectively describes computer packet transfer by using various layers of protocols.

→ History of OSI model :-

→ 1970s, the OSI model conducted a program to develop general standard and method of networking.

(14)

→ Layers of OSI model :-

↳ There are Seven layers in the OSI model.

→ physical layers :-

↳ The physical layer helps you to define the electrical and physical specification of the data connection. This level established the Relationship Between a device and physical transmission medium.

→ Data link layer :-

↳ Data link layer corrects errors which can occur at the physical layer. This layer allows you to define the protocols to establish and terminate a connection network devices.

15
→ Transport Layer:-

↳ The transport layer builds on the network layer to provide data transport from one a source machine to a process on a destination machine.

→ Network Layer:-

↳ The network layer provides the functional and procedural means, transferring variable length data sequence from one node to another connected network.

→ Session Layer:-

↳ Session layer controls the dialogues between computers, it helps you to establish starting and terminating the connections between the local and remote application.

(16)

→ presentation layer:-

↳ presentation layer allows you to define the form in which data is to exchange between the two communication entities. it also helps you to handle data compression and data encryption.

→ Application layer:-

↳ Application layer interacts with an application program, which is the highest level of OSI model.

The Application layer is the OSI model layer, which is closest to the end-user, it means OSI Application layer allows user to interact with other software application.

17

→ The OSI Model :-

