

The datacomm and neterorks information technology essay

[Technology](#), [Information Technology](#)



Q#1: Define Data communications? Ans: Data communication is the exchange of information from source to destination, using transmission medium. The medium can be a cable, air, or space. Q#2: Write a short note on history of Data communications? Ans: In 1837, the modern telecommunication was started with the invention of telegraph by using Samuel Morse codes. And in 1876, the telephone communication was invented by Alexander Graham Bell. And in 1890, the wireless communication technology was developed by Marconi. In 1950, the telephone and telegraph companies had developed a network of communication for industrialized world. In 1958, the Satellite communication technology was developed by U. S government. And today we have 2G, 3G, and 4G mobile communication technologies. Q#3: What are the three major developments of advancement of Data communications systems? Ans: Large-scale integration of circuits reduced cost and size of terminals and communication equipment. New software systems that facilitated the development of data communication networks. Competition among providers of transmission facilities reduced the cost of data circuits. Q#4: Differentiate between local and remote communications? Ans:

Local communication:

If the communication devices are present in a same building or part of same a network and communicate to each other is called local communication.

Remote communication:

If the communication devices are part of two different networks and communicate to each other is called remote communication. Q#5: What do

you understand by effectiveness of DCS? Ans: The communicating devices (software and hardware) must be the part of communication system is called Data Communication system. Its effectiveness depends of three fundamental characteristics. Delivery Accuracy Timelines

Q#6: Components of DCS? Ans: Message: Information or Data. Sender: Device that sends the data information. Receiver: Device that receives the data information. Medium: Physical path that data use to travel from sender to the receiver. Protocol: The rules between communicating devices.

Q#7: Define following? Ans: Session: communication dialog between network users or applications Different Types of this session for Info Exchange. Network: interconnected group of computers and communication devices. Node: a network-attached device. Node can be any device in the network. Link: connects adjacent nodes Wires, Cables, Anything that physically connects two nodes. Path: end-to-end route within a network. Circuit: the conduit over which data travels.

Q#8: What is Routing? Ans: Routing is the process of selecting paths in a network along which to send network traffic.

Q#9: Describe LAN and WAN? Ans: LAN: A local area network (LAN) is a computer network that interconnects computers in a limited area such as a home, school, computer laboratory, or office building using network media. WAN: A Wide Area Network (WAN) is a telecommunication network that covers a broad area (i. e., any network that links across metropolitan, regional, or national boundaries).

Q#10: What are the advantages of distributed processing? Ans: Distributed processing is the use of more than one processor to perform the processing for an individual task.

Advantages:

- Quicker response time: By locating processing power close to user, response time is typically improved. This means that the system responds rapidly to commands entered by users.
- Lower costs: Long-distance communication costs are declining at a slower rate than the cost of computer power. Distributed processing can reduce the volume of data that must be transmitted over long-distances and thereby reduce long-distance costs.
- Improved data integrity: High degrees of accuracy and correctness may be achieved by giving users control over data entry and storage.

Q#11: Discuss any three communication tasks? Ans: Error Detection and Correction: Error Detection and Correction both are techniques to control the error in data information. Error Detection is the technique that just detects the error and error correction in the technique that detects the error and then corrects the error of data information. The error detection technique is mostly use for data information. Which detects the error on receiver side and then send a acknowledgement to resend those packets. For example Cyclic Redundancy check (CRC). Flow control: In data communications, flow control is the process of managing the rate of data transmission between two nodes to prevent a fast sender from outrunning a slow receiver. Flow control is important because it is possible for a sending computer to transmit information at a faster rate than the destination computer can receive and process them. This can happen if the receiving computers have a heavy traffic load in comparison to the sending computer, or if the receiving computer has less processing power than the sending computer. Network Management: Network management refers to the broad subject of

managing computer networks. There exists a wide variety of software and hardware products that help network system administrators manage a network. Network management covers a wide area, including:

Security: Ensuring that the network is protected from unauthorized users.

Performance: Eliminating bottlenecks in the network. Reliability: Making sure the network is available to users and responding to hardware and software malfunctions.