webStrāke

Short Answers
1. Define Intranet
It is a website used by organizations to provide a place where employees can access company related information.
It is a private network within an enterprise to share company data and computing resources between the employees.

2. What is the uses of mobile networks?
A mobile network or cellular network as it is made up of a large number of signal areas called cell.
Mobile networking assign to the technology that can support data / voice, network connectivity using via radio transmission solution, wireless.
wireless communications largely used circuit switching to carry only voice over a network, but now currently both data and voice are being transmitted over both circuit via switched networks and packet-switched networks.

3. List out the benefits of WiFi
● It provides mobility.
● It provides connection to Internet.
● Flexibility of LAN
● Ensures connectivity
● It allows places that are remote to benefit from connectivity.
● Low cost, high benifts

4. How many types of RFID system available and what are they?
Two types of RFID tags were Active RFID and Passive RFID systems.
● Passive RFID tag will be used the reader radio wave energy to really its stored information back to the reader.
● Battery powered RFID tag is installed with small battery that powers the broadcast of information

● Expand HTTP, HTTPS, FTP.
HTTP Hypertext Transfer Protocol   **HTTPS** Hypertext Transfer Protocol Secure
FTP File Transfer Protocol

Other protocol Expand
SMTP Simple Mail Transfer Protocol   **UDP** User Datagram Protocol
SMTP Simple Mail Transfer Protocol   **DNS** Domain Name System

Part - III

Explain in Brief Answer
1. Compare Internet, Intranet and Extranet

Type	Definition	Example
Internet	a global network, public TCP/IP network used by over a billion people all over the world	Sending email to a friend
Intranet	a TCP/IP network with access restricted to members of an organization	Accessing your record in the employee personnel file
Extranet	TCP/IP network with restricted access to members	Checking availability of inventory from an outside supplier

2. List out the components of a RFID enabled system.
Main Components of a RFID System
● **A RFID tag:** It has silicon microchip attached to a small antenna and mounted on a substrate.
● **A reader:** It has a scanner with antennas to transmit and receive signals, used for communication
● **A Controller**: It is the host computer with a Microprocessor which receives the reader input and process the data.

3. Write short notes on HTTP, HTTPS, FTP.
HTTP – A protocol used between a web client and a web server protects non *secure* data transmissions. The core protocol of the World Wide Web.
HTTPS - A protocol used between a web client and a web server permits *secure* data transmissions.
FTP - Used between computers for sending and receiving data. Enables a client to send and receive complete files from a server.

4. What are the layers available in TCP/IP Reference Model?
There are four total layers of TCP/IP protocol,
Network Access Layer – concerned with building packets.
Internet Layer - describes how packets are to be delivered.
Transport Layer - ensure the proper transmission of data.
Application Layer – application network processes.

5. Expand ARP, ICMP, SMTP and DNS.

ARP is **Address Resolution Protocol**. It Resolves IP address to MAC address.

ICMP (**Internet Control Message Protocol**) is an error-reporting protocol network devices like routers use to generate error messages to the source IP address when network problems prevent delivery of IP packets

Simple Mail Transfer Protocol (SMTP): Provide e-mail services

Domain Name System (DNS): Refer to other host computers by using names rather than numbers.

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Part - IV

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Explain in detail

1. Explain about Internet, Intranet and Extranet.

INTERNET:

- The **Internet**, "the Net," is a worldwide system of computer networks.
- A network of networks where the users at any one computer can, if they have permission, get information from any other computer.
- It was perceived by the Advanced Research Projects Agency (ARPA) of the U.S. government in 1969 and was first recognized as the ARPANet.
- The web is one of the services interconnected over the Internet.
- Sending email to a friend

INTRANET:

- It is a private network within an enterprise to share company data and computing resources between the employees. It may consist of many interlinked local area networks.
- It includes connections through one or more gateway (connects two networks using different protocols together known as protocol convertor) computers to outside Internet.
- Accessing your record in the employee personnel file

EXTRANET:

- It is a private network that uses Internet technology and the public telecommunication system to securely share business's information with suppliers, vendors, partners, customers, or other businesses.
- Checking availability of inventory from an outside supplier

2. Discuss about OSI model with its layers.

OSI Model:

Open System Interconnection (OSI) model was found in the year 1934, general framework that enables network protocols along with software and systems to be developed based on general set of guidelines.

It describes the standards for the inter-computer communication.

There are many prompts used to remember the OSI layer order:

- Everyone Needs Data Processing.
- Everyone Should Try New Diet Pepsi.

OSI Layers:

1. Physical Layer: This is the 1st layer, it defines the electrical and physical specifications for devices.

2. Data Link Layer: It is the 2nd layer and it guarantees that the data transmitted are free of errors. This layer has simple protocols like "802.3 for Ethernet" and "802.11 for Wi-Fi".

3. Network Layer: It is the 3rd layer determining the path of the data packets. At this layer, routing of data packets is found using **IP Addressing**.

4. Transport Layer: It is the 4th layer that guarantees the transportation/sending of data is successful. It includes the error checking operation.

5. Session Layer: It is the 5th layer, identifies the established system session between different network entities. It controls dialogues between computers

6. Presentation Layer: It is the 6th layer that does the translation of data to the next layer (Prepare the data to the Application Layer).

Encryption and decryption protocols occur in this layer such as, Secure Socket Layer (SSL).

7. Application Layer: It is the 7th layer, which acts as the user interface platform comprising of software within the system.

3. Difference between TCP/IP and OSI Reference Model.

BASIS FOR COMPARISON	TCP/IP MODEL	OSI MODEL
Expands To	Transmission Control Protocol/ Internet Protocol	Open system Interconnect

Meaning	It is a client server model used for transmission of data over the internet.	It is a theoretical model which is used for computing system.
Definition	**TCP/IP** is a set of protocols which governs communications among all computers on the Internet	It describes the standards for the inter-computer communication.
Number Of Layers	4 Layers	7 Layers
Developed by	Department of Defense (DoD)	ISO (International Standard Organization)
Tangible	Yes	No
Usage	Mostly used	Never used
Obeys	Horizontal approach	Vertical approach

4. Explain about the development, merits and demerits in Mobile networks.

Merits of mobile Network

- Communication over mobile network is be made up of voice, data, images and text messages
- Mobile networking assign to the technology and supports voice/data, network connectivity using via radio transmission solution.
- Mobile networking assign to the technology that can support data / voice, network connectivity using via radio transmission solution, wireless.
- Similarly the common application of mobile networks is mobile phones, tablets, etc..
- now currently both data and voice are being transmitted over both circuit via switched networks and packet-switched networks.

Demerits of mobile Network

Main disadvantages that come with the use of mobile technology in business include:
- **Costs** - new technologies and devices are often costly to purchase and require ongoing maintenance and upkeep.
- **Workplace distractions** - as the range of technologies and devices increases, so does the potential for them to disrupt productivity and workflow in the business.
- **Additional training needs** - staff may need instructions and training on how to use new technology.
- **Increased IT security needs** - portable devices are vulnerable to security risks, especially if they contain sensitive or critical business data.

Network Applications

Application of Internet	Application of Intranet	Application of Extranet
● Download programs and files ● Social media ● E-Mail ● E-Banking ● Audio and Video Conferencing ● E-Commerce ● File Sharing ● E- Governance ● Information browsing ● Search the web addresses for access through search engine ● Chatting and etc	● Sharing of company policies /rules and regulations ● Access employee database ● Distribution of circulars/ Office Orders ● Access product and customer data ● Sharing of information of common interest ● Launching of personal/ departmental home pages ● Submission of reports ● Corporate telephone directories.	● Customer communications ● Online education/ training ● Account status enquiry ● Inventory enquiry ● Online discussion ● Supply – chain managements ● Order status enquiry ● Warranty registration ● Claims ● Distributor promotions

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GANESH G, M.Sc.,B.Ed.,

Computer Instructor,
SRGDS MATRIC.HR.SEC.SCHOOL,
VADAANDAPATTU,
THIRUVANNAMALAI.606601
EMAIL:tvmganesh1991@gmail.com PH:
+918508689938