

CCA-102: Data Communications

ASSIGNMENT-2

Q.1 What are the different types of networks?

Ans There are the different types of networks such

1. as LAN (Local area network) is the limited area network within 1 to 5 kilometers. LAN is also called ethernet connected with wire and wireless.
2. WAN (Wide area network) is also called internet. that connected one to another network with wire or wireless. Type of WAN 1) Interprize WAN 2) Global WAN.
- 3) MAN (Metropolitan area network) A MAN is a network geographics area such as entire city.

As the number of connected personal and IOT device and other connected device use difference type of network such as 1) CAN 2) BPN 3) EPN 4) SAN 5) BAN 6) PAN

Q.2 Explain the Shielded twisted pair (STP) and Unshielded twisted pair (UTP)?

Ans

STP

UTP

1) STP has a metal foil covering.

UTP does not have a metal foil covering.

2) STP gives better resistance to electromagnetic interference as compared to UTP

UTP does not provide better resistance to electromagnetic interference as compared to STP.

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| 3) STP is little expensive than UTP. | UTP is less expensive than STP. |
| 4) Grounding is possible | Grounding is not possible. |
| 5) Possibility of crosstalk is less as it resist to EMI. | Possibility of crosstalk is more as it provide less resistance to EMI. |
| 6) Distance travelled is large and can be used in MAN. | Distance travelled is less and used in LAN. |

Q.3 What is difference between baseband and broadband transmission?

- | <u>Ans.</u> | <u>Baseband</u> | <u>Broadband</u> |
|-------------|---|---|
| 1) | It refers to a communication channel in which information is carried in digital form. | The signals are modulated as radiofrequency analog waves that use different frequency ranges. |
| 2) | Communication is bi-directional which means the same channel is used to transmit and receive signals. | Communication is unidirectional meaning two different channels are needed in order to send and receive signals. |
| 3) | Every device on a baseband system shares the same channel. | Multiple independent channel can carry analog or digital information through FDM. |

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| 4) Baseband LANs are inexpensive and easier to install and maintain. | Broadband system are generally more expensive because of the additional hardware involved. |
| 5) Baseband LANs have a limited distance reach which is no more than a couple miles. | Broadband LANs span much longer distances than baseband (up to tens of Kilometers). |

Q.5 When you move the NIC cards from one PC to another PC, does the MAC address gets transferred as well?

Ans When you move the NIC cards from one PC to another PC, does the MAC address gets transferred as well? Yes, that's because MAC addresses are hard-wired into the NIC circuitry, not the PC. This also means that a PC can have a different MAC address when another one replaced the NIC card.

Q.6 When troubleshooting computer network problems, what common hardware-related problems can occur?

Ans If I understand the question in the event that there are problems in computer network, there are problems with the material such as the network card if it is defective or it is not installed

only the network cable not good, the connection between the connector and the cable is not good. if there are two or more port to take the same name on the same IP address.

Q.7 In a network that contains two servers and twenty workstations, where is the best place to install an Anti-virus program?

Ans An anti-virus program must be installed on all servers and ~~worksheet~~ workstations to ensure protection. That's because individual users can access any workstation and introduce a computer virus when plugging in their removable hard drives or flash drives.

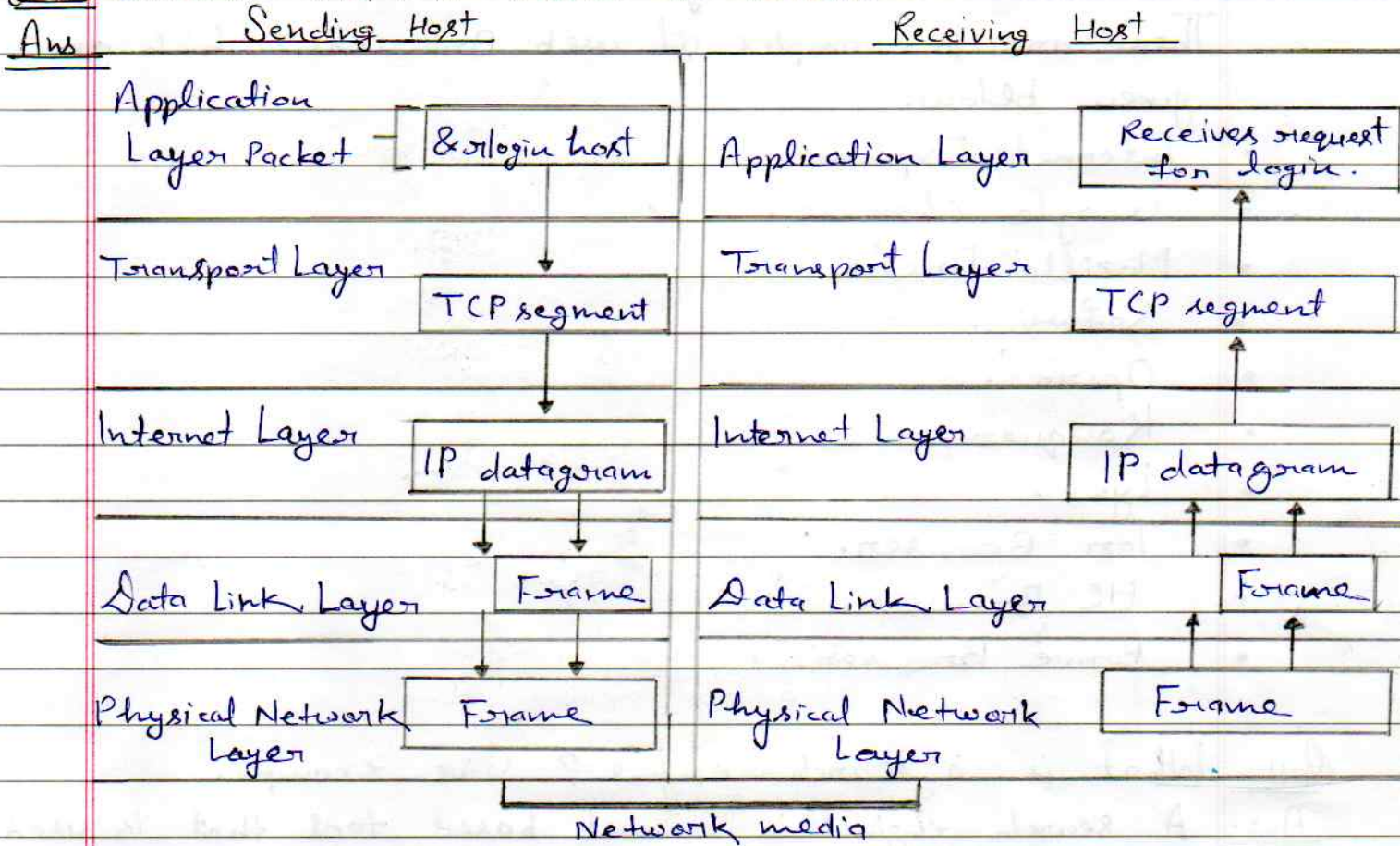
Q.8 Define static IP and Dynamic IP? Discuss the difference between IPV4 and IPV6.

Ans STATIC IP ADDRESS

DYNAMIC IP ADDRESS

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|--|--|
| 1) A permanent numeric address manually assigned to a device in the network. | A temporary IP address that is assigned to a device or a node when it is connected to a network. |
| 2) Assigned manually by the network administrator. | Assigned by the DHCP server automatically. |
| 3) Does not change once it is assigned to a device. | Changes each time the device connects to the network. |
| 4) Less secure. | More secure. |
| 5) Assigning is difficult. | Assigning is easier. |
| 6) Suitable for dedicated services such as mail. | Suitable for a large network that requires internet access to all devices. |

Q.9 Discuss TCP/IP model in detail.



Q.10 What is a Web Browser (Browser)? Give some example of browsers.

Ans: A web browser is the software installed on your computer or mobile that allows you to view web pages. The first web browser, World Wide Web, was developed by Tim Berners-Lee in 1990. It was created to allow researchers at CERN (European Organization for Nuclear Research) to share information about particle physics over the internet. Since then, many browsers have been developed and are available for you to use. There are many different types of browsers. Some of them are free

and some cost money.

There are 10 examples of web Browsers, which are given below.

- Internet Explorer.
- Google Chrome.
- Mozilla Firefox.
- Safari.
- Opera.
- Konqueror.
- Lynx.
- Tor Browser.
- UC Browser.
- Brave Browser.

Q.11 What is a search engine? Give example.

Ans. A search engine is a web based tool that is used by people to locate information on the internet.

Some of the most popular examples of search engines are Google, Bing, Yahoo!, & MSN Search.

Google is the most used search engine world wide with a 92 percent market share in mid-2019.

Google may be one of the most popular search engines but there are many more alternative search engines available for users.

Top search Engines alternative to Google :-

- | | | |
|---------------|--------------|----------------|
| 1) Bing | 6) Swisscows | 11) Disconnect |
| 2) DuckDuckGo | 7) CC Search | 12) Ask |
| 3) Wiki.com | 8) Gribiru | |
| 4) Ecosia | 9) Qwant | |
| 5) Yahoo! | 10) Yandex | |

Q.12 What is an Internet Service & WWW? What are the uses of internet in our daily life?

Ans Internet

- 1) A global system of interconnected computer networks that use the TCP/IP protocol to link devices world wide.
- 2) A massive interconnection of computer networks around the world.
- 3) Uses Transmission Control Protocol/Internet Protocol (TCP/IP).

World Wide Web

Online contain * that is formatted in HTML and accessed via HTTP protocol.

Service provided by the internet.

Uses Hyper Text Transfer Protocol (HTTP).

- Education ①

Banking ③

Emails ⑤

Finance & Accounting ⑦

E-commerce ⑨

Recharges/Bill Payments ⑪

Job search ⑬

Advertising & Marketing ⑮

E-paper & News ⑰

Entertainment ⑲

Navigation ⑳

Uses
of
Internet

② Business

④ Research

⑥ Social Media

⑧ Cashless Transactions

⑩ Online Orders & Booking

⑫ E - Ticketing

⑭ File Transfers

⑯ Broadcasting

⑰ Blogging & Publishing

⑲ Gaming

⑳ Home

Q.13 What is an internet Service Provider? Give some example of ISP in India.

Ans An Internet service provider is an organization that provides services for accessing, using, or participating in the internet. Internet service providers can be organized in various forms such as commercial, community-owned, non-profit, or otherwise privately owned.

- 1) Airtel India
- 2) Beam Fiber
- 3) Bharti Airtel
- 4) Bharti Enterprises
- 5) BSNL Broadband
- 6) ~~San~~ DEN Networks
- 7) Idea Cellular
- 8) Jio
- 9) Mahanagar Telephone Nigam
- 10) MTS M-Blaze
- 11) Sanchonet
- 12) Sifi Cable
- 13) Spectranet
- 14) Spice Telecom
- 15) Tata Teleservices
- 16) Tikona Digital Networks
- 17) Uninor
- 18) Videocon
- 19) Vodafone India
- 20) You Broadband

Q.14 Discuss the difference between MAC address, IP address and Port address.

Ans An IP address is a 4 Byte identifier, that identifies your internet access in a worldwide unique fashion. It is like the address of your house. It is used by the internet router to deliver a data packet to your house. In arabic numbers IP addresses (version 4 - there is also a new standard version 6) are shown as a a.b.c.d where a, b, c and d are integers between 0 and 255.

A Mac address is an identifier of your computer's network access. It is imprinted by your computer's manufacturer on the network card, and is manufacturer specific. Mac addresses used to be unique to a device but that is long gone. Strictly speaking they are needed inside a local area network for direct delivery of a packet from one machine to another one, directly connected. Inside a LAN they must be unique.

A port address is an identifier (16 bit, integer up to 65535) that identifies the application on your machine, to deliver the packet received by the network card to. In the analogy of the house address, this is your or another person's name living in that house so that the delivery can be completed.

Q.15 How do we view my Internet browser's history
Ans Android phone or tablet running google chrome

- 1) Open the Google Chrome Internet browser.
- 2) In the upper-right ~~corner~~ corner of the screen tap the icon.
- 3) In the drop-down menu that appears, select History and shown in the image.
- 4) The page that opens contains your device's history.