**TERM-2 CCNA Assignment**

**Module 7 Network fundamentals**

 Advance Question

1. Network topology is a connection of a various devices to communicate with each other network.
2. Application, Transport, Internet, Network
3. LAN – Two or more than two devices are connected with each other in same network its called LAN

WAN – Two or more than two MAN are connected

1. A switch is work on datalink layer of the osi model and send the data packet to the destination devices and the first packet will deliver as broadcast packet and its called BPDU packet.
2. NIC – It is a network adaptor to connect the computer network.

SWITCH – A switch is works at data link layer of the OSI model.

Router – It is use for connect two different network together.

1. Straight Cable – they are used to connect two different device.

Crossover Cable – they are used to connect same device.

Rollover Cable – they are used to configure Router.

1. Network Device – A network device is an individual component of the network that participates at one or more of protocol layers.

Hosts – A host is any hardware device that has the capability of permitting access to a network via user interface.

1. In case of classic ethernet it is an 8 byte filed and in case IEEE 802.3 it is 7 bytes. Start of frame delimiter. It is a 1 byte filed in a IEEE 802.3 Frane that contains an alternating pattern of ones and zeros ending with two ones.

 Intermediate Question

1. Comparison between UTP, MM and SM Ethernet Cabling.
2. Done in lab.
3. Done in lab.
4. LAN and WAN are two types of computer network while LAN network are used for localized area and WAN network are used for Wide area network.
5. ARP – it is used for converting IP address to mac address

ICMP – it is stand for internet control message protocol

Domain Name – a domain name is an easy to remember name that’s associated with a physical IP address on the internet.

1. Client, server, channels, Interface devices, OS
2. The data is encapsulated in every layer at the sender’s side and also de-encapsulated in the same layer at the receiver’s end of the OSI model.
3. Network segmentation divides a network into multiple zones and manages each zone or segment.
4. It is a set measures taken to regulate the amount of data that a sender sends so that a fast sender does not over a slow receiver. In data link layer, flow control restricts the number of frames the sender can send before it waits for an acknowledgment from the receiver.

 Advance question

1. The department of defence model is basically a condensed version of the OSI model – it’s composed of four instead of seven layers – Application, Transport, Internet, Network Access.
2. Physical Layer – it is a lowest layer of OSI model and it is convert all data into bit format.

Data link layer – The data link layer is responsible for the node to node delivery of the message.

Network Layer – The network layer works for the transmission of data from one host to the other located in different network.

Application Layer – It is the top layer of OSI model and it is communicates between web client and web server.

1. CSMA/CD – Carries sense multiple access with collision detection. It is used to control the traffic in the switch in wire network.

CSMA/CA - Carries sense multiple access with collision Avoidance. It is use to control traffic in wireless network.

1. A frame is the protocol data unit at the data link layer. Frames are the result of the final layer of encapsulation before the data is transmitted over the physical layer.
2. Done in lab
3. Done in lab
4. Straight Cable – It is mainly used for connect different device.

Crossover Cable – It is used for connecting same devices.

|  |  |
| --- | --- |
| Layer 2 | Layer 3 |
| Unmanageable | Manageable |
| It has no storage space | It uses NVRAM |
| It stores temporary files | It stores permanent files. |

1. A broadcast domain is a type of domain where in traffic flows all over the network. The collision domain refers to a set of devices in which packet collision could occur.
2. STP stop the loop which occurs when you have multiple links between switch . STP is open standard.
3. Unicast – It has one sender and one receiver.

Multicast – It has one sender multi receiver but not all

Broadcast – It has one sender all receiver.

1. Explain CAM ( Content Addressable Memory)
2. Explain CAM (Ternary Content Addressable Memory)
3. Show mac-address