**DV300\_7\_SAS on video related to Network components**

**Self-Assessment Sheet**

Q1. DOCSIS Modem stands for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. And those who have broadband cable internet will recognize this device.

A1. Data Over Cable Services Interface Specification.

Q2. DOCSIS modem handles both incoming and outgoing data signals including internet video and voice. The DOCSIS 3.1 specifications support speeds of 10 GB downstream and 1 GB upstream. (True/False)

A2. True

Q3. A hub is a device that has multiple ports that accepts \_\_\_\_\_\_\_\_\_\_\_\_\_\_ from network devices. It is considered not to be intelligent because it does not filter any data or has any intelligence to where data is supposed to be sent.

A3. Ethernet

Q4. A data packet arrives at one of the ports it is copied to all other ports. All the devices on that hub sees that data packet. (True/False)

A4. True

Q5. The two types of hubs are \_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A5. Passive & Active

Q6. What is the difference between Passive and active hubs?

A6. The difference is a passive hub does not require power but in active hub does require

power.

Q7. A switch is very similar to a hub. It is also a device that has multiple ports that accepts \_\_\_\_\_\_\_\_\_\_\_\_\_through network devices.

A7. Ethernet Connection

Q8. A switch can actually learn the \_\_\_\_\_\_\_\_\_\_ addresses of the devices that are connected to it and it stores these addresses to cables.

A8. MAC

Q9. When a data packet is sent to a switch, it directs it only to the intended destination port. (True/False)

A9. True

Q10. Multilayer switch is operated at higher levels of the \_\_\_\_\_\_\_\_\_\_ model. A multilayer switch can operate at \_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_ 3 of the OSI model. It is able to interpret layer 3 data similar to a router.

A10. OSI ; Layer 2 & Layer 3

Q11. A \_\_\_\_\_\_\_\_\_\_\_\_\_ switch operates at layers 4 to 7 of the OSI MODEL. This type of switch can perform load balancing and advanced filtering. And these switches are also very expensive.

A11. Content

Q12. POE which stands for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, gets data from the same cable which is through the ethernet cables. As don’t have any electrical port

A12. Power Over Ethernet

Q13. In some networks \_\_\_\_\_\_\_\_\_\_\_\_\_ \_ are installed in case a switch does fail so in a case of failure the data can bypass a failed switch and use the other to get the destination.

A13. Multiple Switches

Q14. A potential problem can happen with multiple switch network is that with broad\_\_\_\_\_\_\_\_\_\_\_\_\_. These loops can happen when there are multiple active pass between the destination. And when this happens it can \_\_\_\_\_\_\_\_ the network because of the excess traffic.

A14. Broadcast Traffic loops ; Slowdown the network

Q15. To solve the cast traffic loops problem the \_\_\_\_\_\_\_\_\_\_ protocol is created. It allows for fault tolerance and prevents unnecessary \_\_\_\_\_\_\_\_\_\_\_in the networks. And it does this by allowing the switches to talk to each other to find if loops are happening in the network.

A15. Spanning Tree ; Traffic loops

Q16. \_\_\_\_\_\_\_\_\_\_\_\_ are used to divide a network to separate collision domains.

A16. Bridges

Q17. If you add a bridge to a network it will reduce any unnecessary traffic between two segments by filtering the data based on their MAC address. Bridge only allows data to crossover to a MAC address of the destination because a bridge keeps record of all the Mac addresses. (True/False)

A17. True

Q18. A router is a device that routes data from one network to another based on its\_\_\_\_\_\_\_\_. When a data packet is received from the router, the router inspects the packet and determines if the packet was meant for\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

A18. IP Address ; Own Network or other network.

Q19. If the router determines that the data packet is meant for its own network it receives it. But if it is not meant for its own network, it sends it off to another network. A router is essentially a gateway for a network. (True/False)

A19. True

Q20. A \_\_\_\_\_\_\_\_ can be defined as a device that joins 2 networks together. They interconnect networks with different or incompatible communication \_\_\_\_\_\_\_\_\_\_\_. It however does not change the data, it only changes the format of the data.

A20. Gateway ; Protocol

Q21. CSU and DSU stands for \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

A21. Channel Service Unit / Data Service Unit

Q22. CSU/DSU converts data from\_\_\_\_\_\_\_\_\_\_\_\_\_\_ to \_\_\_\_\_\_\_\_, because their data formats are very different.

A22. LAN to WAN

Q23. NICS stands for \_\_\_\_\_\_\_\_\_\_\_\_ is used to connect the computer to a network. It is basically a circuit board or network adapter that is installed on your computer. And its jobs is to convert \_\_\_\_\_\_\_\_\_\_\_\_ into \_\_\_\_\_\_\_\_\_\_\_\_

A23. Network Interface Card ; Serial data into Parallel Data

Q24. A \_\_\_\_\_\_\_\_\_\_\_ is a device that has both a transmitter and a receiver in the same package. The term applies to wireless communication in devices.

A24. Transceiver

Q25. \_\_\_\_\_\_\_\_\_\_\_\_ is basically a wireless hub that is used for wireless devices. It connects to a wired network and releases data between \_\_\_\_\_\_\_network and the wireless device for communication purposes.

A25. WAP ; Wired Ethernet

Q26. A dialogue modem is a device that allows a computer to transmit data over normal telephone lines. The data coming in from a telephone line is \_\_\_\_\_\_\_\_\_\_. A data in a computer is all \_\_\_\_\_\_\_\_\_\_\_

A26. Analog ; Digital.

Q27. Modem converts analog data to digital data and a maximum speed of most modem todays is \_\_\_\_\_\_\_\_\_\_\_\_\_\_

A27. 56 Kbps