**DV162\_7\_PAS on video related to Network components**

**Possible Ansewers 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. False.

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 Connections.

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. Passive hubs require power while active hubs do not 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. Connections.

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

A8. Physical.

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. Cast, Slow down.

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, its own network or another 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, Protocols.

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. Digital to Analogue.

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, Incoming Serial Data, 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. WAPs (Wireless Access Points).

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. Analogue, Digital.

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

A27. 10GB.