

# Product Questions: 854

## Version: 37.7

Topic 1, Exam Pool A

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### Question: 1

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Which of the following would an administrator use to migrate virtual machines from on premises to the cloud?

- A. IaaS
- B. SaaS
- C. DBaaS
- D. DRaaS

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**Answer: A**

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Explanation:

An administrator would use Infrastructure as a Service (IaaS) to migrate virtual machines from on-premises to the cloud. IaaS is a cloud computing service that provides virtualized computing resources, such as servers, storage, and networking, that can be used to deploy and run applications in the cloud. By using IaaS, an administrator can create a virtual machine in the cloud and migrate the existing virtual machine from on-premises to the cloud. Reference: CompTIA A+ Certification Exam: Core 1 - Objective 3.3

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### Question: 2

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A user, who is attempting to give a presentation via a projector in a conference room, reports the projector has video but no audio. Which of the following will MOST likely resolve the issue?

- A. Changing the input on the projector to VGA
- B. Changing the output on the PC to DVI
- C. Modifying the projector's refresh rate
- D. Utilizing an HDMI connection

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**Answer: D**

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Explanation:

The issue of video but no audio on a projector in a conference room can be resolved by utilizing an HDMI connection between the PC and the projector. HDMI supports both video and audio signals and is commonly used to connect a PC to a projector for presentations. Changing the input on the projector to VGA, changing the output on the PC to DVI, or modifying the projector's refresh rate will not resolve the issue. Reference: CompTIA A+ Certification Exam: Core 1 - Objective 2.5

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**Question: 3**

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Which of the following standards supports MIMO technology?

- A. 802.11a
- B. 802.11b
- C. 802.11g
- D. 802.11n

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**Answer: D**

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Explanation:

The 802.11n wireless networking standard supports Multiple Input Multiple Output (MIMO) technology. MIMO technology uses multiple antennas on both the transmitting and receiving devices to improve wireless performance by increasing the amount of data that can be transmitted simultaneously. 802.11a, 802.11b, and 802.11g do not support MIMO technology. Reference: CompTIA A+ Certification Exam: Core 1 - Objective 3.3

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**Question: 4**

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A user requested upgrades to a company-issued laptop to increase its performance while working with a large database stored on drive C. Which of the following tasks should a systems administrator complete to BEST meet this goal? (Select TWO).

- A. Configure RAID 1.
- B. Install a hybrid drive.
- C. Upgrade to 1GB NIC.
- D. Increase the RAM.
- E. Migrate to a SSD.
- F. Upgrade the power supply.

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**Answer: D,E**

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Explanation:

To increase the performance of a laptop working with a large database stored on drive C, a systems

administrator should increase the RAM and migrate to an SSD. Increasing the RAM will help the laptop to better handle the large database, while migrating to an SSD will improve the speed at which the laptop can access the database. Configuring RAID 1, installing a hybrid drive, upgrading to a 1GB NIC, and upgrading the power supply will not directly improve the laptop's performance when working with a large database. Reference: CompTIA A+ Certification Exam: Core 1 - Objective 3.1

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**Question: 5**

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Which of the following technologies can allow multiple networks to traverse a switch?

- A. VLAN
- B. VRRP
- C. VPN
- D. DHCP

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**Answer: A**

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Explanation:

The technology that allows multiple networks to traverse a switch is VLAN (Virtual Local Area Network) which is a logical grouping of devices on the same network regardless of their physical location<sup>12</sup>.

Virtual Local Area Network (VLAN) technology can allow multiple networks to traverse a switch. A VLAN is a logical network created within a physical network that can separate traffic and allow multiple networks to coexist on the same physical network infrastructure. VRRP (Virtual Router Redundancy Protocol), VPN (Virtual Private Network), and DHCP (Dynamic Host Configuration Protocol) do not allow multiple networks to traverse a switch. Reference: CompTIA A+ Certification Exam: Core 1 - Objective 3.2

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**Question: 6**

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A company just bought a printer capable of automatically printing on both sides of the paper. After installation, however, the technician can only print on both sides of the paper manually. Which of the following should the technician do to fix the issue?

- A. Install the most recent firmware upgrade available for the printer.
- B. Contact the vendor for a hardware replacement.
- C. Reinstall the printer software and drivers, and then restart the printer.
- D. Read the installation manual and configure duplex settings.

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**Answer: D**

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Explanation:

The issue described in the question is most likely due to an incorrect configuration of the printer's

duplex settings. To enable automatic duplex printing, the technician needs to read the printer's installation manual to understand how to configure the printer's duplex settings correctly. Once the settings are configured, the printer should be able to print on both sides of the paper automatically. To fix the issue of a newly installed printer capable of automatically printing on both sides of the paper but only printing on both sides manually, the technician should read the installation manual and configure duplex settings. Duplex printing settings can be configured in the printer driver software, which can be accessed through the printer settings in the Control Panel. Installing the most recent firmware upgrade available for the printer, contacting the vendor for a hardware replacement, or reinstalling the printer software and drivers and restarting the printer will not resolve the issue.

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**Question: 7**

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An online retailer would like to add capacity to support increased sales. Additional servers have been installed. Which of the following should be used to ensure each new server is being properly utilized?

- A. Virtualization
- B. Clustering
- C. Load balancer
- D. Round-robin DNS

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**Answer: C**

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Explanation:

<https://www.resonatenetworks.com/2020/04/29/clustering-vs-load-balancing-whats-the-difference/>

A load balancer distributes network traffic evenly across multiple servers, ensuring each server is being properly utilized. This helps to prevent overloading of any individual server, which can cause downtime or slow response times for users. In this scenario, adding a load balancer would be the best way to ensure the new servers are being properly utilized. Reference: CompTIA A+ Certification Exam: Core 1 - Page 181

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**Question: 8**

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Which of the following utilizes TCP ports 20/21 and transfers data in cleartext?

- A. SNMP
- B. SSH
- C. FTP
- D. Telnet

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**Answer: C**

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Explanation:

FTP (File Transfer Protocol) uses TCP ports 20/21 and transfers data in cleartext, which means the data is not encrypted and can be read by anyone who intercepts it. This makes FTP insecure for transferring sensitive information. SSH (Secure Shell), on the other hand, uses port 22 and encrypts data, making it more secure. SNMP (Simple Network Management Protocol) uses ports 161/162 and is used to monitor network devices. Telnet uses port 23 and transfers data in cleartext, making it insecure. Reference: CompTIA A+ Certification Exam: Core 1 - Page 199

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**Question: 9**

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A customer is using a satellite internet connection that is experiencing slowness. A technician notices high latency while pinging, but the download test is performing perfectly with very good download speeds. Which of the following represents the NEXT action the technician should perform?

- A. Restart the modem and run an online internet connection and speed diagnostic tool.
- B. Guide the customer on how to upgrade the internet plan with the provider in order to improve latency.
- C. Explain to the customer this is not an issue; this situation is normal for this type of internet connection.
- D. Replace the modem because it is not working correctly based on the test result.

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**Answer: A**

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Explanation:

The technician should restart the modem and run an online internet connection and speed diagnostic tool<sup>1</sup>. High latency is a common issue with satellite internet connections, and it can cause slow internet speeds<sup>2</sup>. Restarting the modem can help to resolve the issue<sup>1</sup>. The technician should also run an online internet connection and speed diagnostic tool to check the connection and speed<sup>1</sup>. Guiding the customer on how to upgrade the internet plan with the provider in order to improve latency is not likely to be the correct option<sup>2</sup>.

High latency while pinging can indicate a problem with the modem or the connection between the modem and the satellite. Restarting the modem can often resolve connectivity issues. Running an online internet connection and speed diagnostic tool can help identify any other issues with the connection. Upgrading the internet plan may not resolve latency issues and may not be necessary if the download test is performing perfectly with very good download speeds. High latency is not normal for satellite internet connections, so replacing the modem based on this one test result is premature. Reference: CompTIA A+ Certification Exam: Core 1 - Page 102

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**Question: 10**

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An organization maintains various record types, including health and criminal justice records. Which of the following cloud environments is the organization MOST likely to use to limit the attack surface?

- A. Public

- B. Hybrid
- C. Community
- D. Private

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**Answer: D**

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Explanation:

Private cloud environments are designed for use by a single organization and offer the greatest control over security and access to data. They are typically used for sensitive or confidential data, such as health and criminal justice records. Public cloud environments are shared by multiple organizations and offer less control over security and access to data. Hybrid cloud environments combine public and private clouds, while community clouds are shared by multiple organizations with similar needs. Reference: CompTIA A+ Certification Exam: Core 1 - Page 234

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**Question: 11**

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Which of the following components enables the input on a mobile device's touch screen?

- A. OLED
- B. Digitizer
- C. Inverter
- D. CMOS sensor

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**Answer: B**

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Explanation:

The digitizer is the component that enables input on a mobile device's touch screen. It is a transparent layer that sits over the screen and detects the location of touch inputs. OLED (Organic Light Emitting Diode) is a type of display technology. Inverter is a component used in older LCD displays to provide power to the backlight. CMOS (Complementary Metal-Oxide-Semiconductor) sensor is a type of image sensor used in digital cameras and smartphones to capture images. Reference: CompTIA A+ Certification Exam: Core 1 - Page 177

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**Question: 12**

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Which of the following should the data center hardware technician implement to ensure maximum uptime for customers' virtual machines?

- A. Line conditioner
- B. AC voltage regulator
- C. Uninterruptible power supply
- D. Cloud storage backup

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**Answer: C**

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Explanation:

An uninterruptible power supply (UPS) can help ensure maximum uptime for customers' virtual machines by providing a backup power source in case of a power outage or other power-related issues. A line conditioner and AC voltage regulator are designed to stabilize the power supply, but do not provide backup power. Cloud storage backup is a way to backup data, but does not directly impact uptime. Reference: CompTIA A+ Certification Exam: Core 1 - Page 159

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**Question: 13**

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A field technician has been dispatched to a site with an internet outage. Upon arriving, the technician discovers that the POTS lines are not working as well. Which of the following technologies is the site MOST likely using?

- A. Fiber
- B. Cable
- C. DSL
- D. Satellite

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**Answer: C**

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Explanation:

DSL (Digital Subscriber Line) uses POTS (Plain Old Telephone Service) lines to provide high-speed internet access. If the POTS lines are not working, it could cause an internet outage for DSL customers. Fiber and cable internet typically use different types of infrastructure, while satellite internet is not reliant on POTS lines. Reference: CompTIA A+ Certification Exam: Core 1 - Page 231

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**Question: 14**

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A customer reports that a computer is never able to reach more than a 100Mbps transfer data rate, even when using a Gigabit LAN card. While troubleshooting, the technician notices the network cable needs to be replaced. Which of the following cable categories is limiting the transfer speed?

- A. Cat 5
- B. Cat 5e
- C. Cat 6
- D. Cat 6a

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**Answer: A**

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Explanation:

Cat 5 cable is limited to a maximum data transfer rate of 100Mbps, while Cat 5e, Cat 6, and Cat 6a cables support Gigabit Ethernet (1000Mbps) and higher speeds. Even though the LAN card is capable of Gigabit speeds, it cannot achieve that speed when using a Cat 5 cable. Upgrading to a Cat 5e or higher cable would allow the computer to achieve Gigabit speeds. Reference: CompTIA A+ Certification Exam: Core 1 - Page 196

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**Question: 15**

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A user on a SOHO network is unable to watch online videos, even at 240 pixels. The technician runs ipconfig from the user's computer and records the following:

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Connection-specific DNS Suffix .: lan
Link-local IPv6 Address . . . . .: fe80::1585:7fb2:b05f:7102%12
IPv4 Address. . . . .: 192.168.1.131
Subnet Mask . . . . .: 255.255.255.0
Default Gateway . . . . .: 192.168.1.1
```

The technician then connects a test laptop to the router via the user's Cat 5 cable and records the following information:

```
Download: 85 mbps
Upload: 22 mbps
Ping: 28 ms
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Which of the following is MOST likely causing the user's issue?

- A. Incorrect IP address
- B. Faulty NIC
- C. Misconfigured default gateway
- D. Bad network cable

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**Answer: B**

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Explanation:

Based on the information recorded by the technician, the network connection appears to be functioning normally. The user's computer is properly configured with an IPv4 address, subnet mask, and default gateway, which should allow the user to access the internet and online videos. The high download and upload speeds and low ping time recorded from the test laptop also indicate that the network is working well. However, the user's inability to watch online videos suggests that there might be an issue with the network card (NIC) on the user's computer. The NIC might be faulty or malfunctioning, which is preventing the computer from receiving and processing the video data. The technician should try replacing the NIC to resolve the issue.

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**Question: 16**

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A technician needs to recommend an internet connection for a customer who travels around the world and wants to have connectivity while visiting remote camping locations. Some of the locations the customer visits have limited or unreliable cellular service. Which of the following connection types should the technician recommend?

- A. Satellite
- B. DSL
- C. Fiber
- D. Hotspot

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**Answer: A**

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Explanation:

The connection type that the technician should recommend is Satellite. Satellite internet is a good option for people who travel around the world and want to have connectivity while visiting remote camping locations. It works by using terminals which can give you internet access in remote locations as long as they have a line of sight to the satellite in orbit above<sup>12</sup>.

Since the customer travels to remote camping locations with limited or unreliable cellular service, the best recommendation is satellite internet connection. Satellite internet uses a dish to connect to satellites orbiting the earth, which can provide coverage anywhere in the world as long as there is a clear line of sight to the satellite. This is especially useful in remote areas where traditional terrestrial connections are not available. Reference: CompTIA A+ Certification Exam Objectives - 220-1001: 1.6 Given a scenario, evaluate connection type and bandwidth.

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### Question: 17

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While implementing a non-carrier-grade wireless backhaul, a technician notices the current channel selection is extremely polluted with various RF signals. Upon performing a spectral analysis, the technician discovers a channel containing almost no RF pollution. Unfortunately, the technician is unable to select that channel. Which of the following is the MOST likely reason for this issue?

- A. The channel is reserved for licensed band use.
- B. The channel selection is defective; contact the manufacturer.
- C. The channel must be unlocked by the vendor.
- D. The device requires a firmware update to unlock the channel.

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**Answer: A**

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Explanation:

The most likely reason that the technician is unable to select the channel with almost no RF pollution is that it is reserved for licensed band use. Some channels are reserved for specific purposes and require a license to use. These licensed bands are typically used for critical infrastructure, public safety, or military operations, and unlicensed devices are not allowed to use them. Reference: