**Which of the following are true about Classless Interdomain Routing (CIDR)?**

Ans:

The prefix length for a CIDR prefix can be anywhere in the range from 0 to 32 bits.

CIDR slowed the rate of Internet routing table growth because prefixes no longer had to be allocated in fixed-size blocks

**Which of the following are true about how DNS lookups work?**

An NS-record query for a DNS lookup will return the name(s) of the authoritative name server(s) for that domain.

**Which of the following are true about traffic control with BGP?**

A network operator can use the BGP local preference attribute to control outbound traffic from his or her AS to a destination.

A network operator can use BGP AS path prepending to control inbound traffic from his or her AS to a destination.

**Which of the following are true about layering?**

The transport layer uses port numbers.

The network layer has only a single protocol in widespread use today, representing what we call the “narrow waist”.

**Which of the following are not true about packet switching?**

Once a connection is established between two endpoints in a packet switched network, the end-to-end route cannot change, or the connection must be re-established.

A user of a packet switched network might occasionally get a “busy signal” if there are too many users on the network.

Traffic running over a packet-switched network between two endpoints will never be dropped by intermediate nodes along the path.

Traffic running over a packet-switched network between two endpoints will always experience predictable latency.

**Which of the following are true about content distribution networks?**

Content distribution networks can reduce transit expenses for a content provider by enabling much of the provider’s content to be served from a nearby network, sometimes even from a cache that is within the client’s own network.

Content distribution networks can improve the performance that a client sees by reducing the network latency between the client and the content that it is downloading

**Which of the following are true about 802.11 wireless medium access control?**

Using RTS/CTS (“request to send”, “clear to send”) control reduces the overall achieveable throughput of the wireless network.

**Which of the following are true about video streaming?**

Using TCP for video streaming could result in larger delays between transmission and playout than streaming the same video with UDP.

Using UDP to stream a video instead of TCP is appropriate if the client is more concerned about low delay and interactivity than it does about receiving a high-quality stream.

A larger playout buffer at the client allows the client more time to recover from lost packets.

**Which of the following are true about TCP?**

A TCP sender controls its sending rate by adjusting the number of unacknowledged packets that can be sent over the network at any time.

TCP guarantees that the receiver sees the same in-order stream of bytes that the sender transmitted.

TCP’s congestion avoidance algorithm causes the sender to reduce its sending rate by a factor of two when it sees a packet loss.

**Which of the following are true about the denial of service attacks (and defenses)?**

A “DNS Reflection” attack requires the attacking client to “spoof” the source IP address of the packet containing the DNS request.

If every network on the Internet performed stateless egress filtering to defend against source IP address spoofing, the DNS reflection attack could not be carried out.

In a “SYN Flood” attack, each TCP SYN packet that a victim receives causes it to set up TCP connection state.