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# Quiz(Week 2)

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**Q1.** In the Internet, which layer has only one choice of protocol

- A. Physical
- B. Network**
- C. Transport
- D. Application

**Q2.** Which layer is NOT implemented in Internet routers

- A. Physical
- B. Data link
- C. Network
- D. Transport**

**Q3.** Do a quick search on the Internet on "firewall" (some information about firewall is also available in your text on page 376, 7th Ed., for example). Why do you think that firewall violates the layering principle?

**Solution: Firewall access various Application and Transport layer header fields thus breaking the end-to-end notion for these layers. You can also include deep packet inspection (DPI) boxes in this regard.**

**Q4.** Find about "TCP Splitting" from the Internet. Your text also contains some information about TCP Splitting on page 303, 7th Ed., for example. What is the motivation for TCP Splitting to break the layering principle?

- A. Security
- B. Performance in terms of reducing the packet header size
- C. Performance in terms of reducing the end-to-end delay**
- D. Performance in terms of reducing the queueing delay in the routers

**Q5.** Network applications run on

- A. network core devices, such as routers and switches
- B. end hosts, such as smartphones and desktops**
- C. access routers or gateways, such as wireless routers
- D. all of the above

**Q6 .** If two processes on the same machine want to communicate with each other, they

- A. must send messages to each other

**B. do not have to send messages to each other, but can simply share some common memory space within the same machine**

C. must use TCP

D. could use FTP

**Q7** . The client process must use a well-known port number for its socket. True or **False** ?

**Q8** . Client-Server architecture can only be implemented with TCP at the transport layer. True or **False** ?

**Q9**. HTTP belongs to

A. Transport layer

**B. Application layer**

C. Network layer

D. Physical layer

**Q10** . To send the number 256, HTTP will consume

A. 1 byte

B. 2 bytes

**C. 3 bytes**

D. 4 bytes

**Q11** . We could achieve some of the things achieved with cookies today if HTTP was 'stateful' (i.e., NOT stateless). **True** or False?

**Q12** . If SMTP only allows 7-bit ASCII, how do we send pictures/videos/files via email?

A. We use a different protocol instead of SMTP

**B. We encode these objects as 7-bit ASCII**

C. We're really sending links to the objects, rather than the objects themselves

D. We don't !! You have been lied to !!

**Q13** . Which of the following is NOT true?

A. HTTP is pull-based, SMTP is push-based

B. HTTP uses a separate header for each object, SMTP uses a multipart message format

C. SMTP uses persistent connections

**D. HTTP uses client-server communication but SMTP does not**

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