The Internet – Lessons 11-13 – Practice

Name: _____

1. Circle the two statements about packets and routing on the Internet which are true:
   - Packets travelling across the Internet take a standardized amount of time and so can be counted on to arrive in the order they were sent.
   - TCP ensures messages can be reliably transmitted across the Internet
   - TCP depends on the infrastructure of the Internet to be reliable enough to ensure no packets are lost in transmission
   - TCP must account for the fact that packets may not arrive at a destination computer in the intended order.

2. Which of the following is NOT true about packets?
   a. Packets are numbered so if they arrive out of order the message can be reassembled.
   b. A message sent across the Internet can always be contained in a single packet
   c. Packets are routed on different paths from sender to receiver.
   d. The receiver computer must confirm to the sending computer that each packet was received.

3. Match the description with the vocabulary term:

Protocol	A packet of data that uses 32-bit addresses
Packet	A chunk of information that gets sent on the Internet
The Internet Protocol (IP)	The required structure of a packet to be sent on the Internet
IPv4 packet	A well-known set of rules and standards used to communicate

4. A single central register of IP addresses and names (a DNS style system) is an efficient means of translating human readable names to IP addresses. Which of the following is NOT solved by DNS?
   a. It is inefficient to have everyone on the Internet maintain their own list of IP addresses
   b. There are too few IP addresses to meet the current demand.
   c. When someone new joins the Internet they must inform everyone else of the new IP address
   d. When an IP address changes, it is impossible to locate a computer until the owner announces the change

5. Why do computers need to periodically check the DNS for websites you have already visited?

6. Why don't we need to know the IP addresses for our favorite sites?

7. What feature of DNS and IP allow the internet to scale?
   a. Redundancy
   b. Hierarchy
   c. Multiple servers
   d. Government control

8. Multiple Choice: HTTP is considered to be a high-level protocol because:
   a. HTTP requests are given higher priority for fast delivery when being routed on the Internet.
   b. HTTP requests are encoded using higher-frequency radio waves.
   c. HTTP messages can be either requests or responses.
   d. HTTP requests make use of abstractions provided by lower-level protocols.

9. Choose Two: Choose the two true statements about HTTP:
   a. An HTTP request is sent from a client to request access to data stored on a server.
   b. HTTP requests and responses have identical formats.
   c. Displaying a web page will often require multiple HTTP requests in order to acquire all the necessary data.
   d. An HTTP response code is only used when a server could not fulfill a request.

10. Free Response: The definition of HTTP makes use of the ASCII character set, without reference to how these characters are encoded. Explain why this is an example of abstraction.