ANSWER KEY

1. **B**
2. **B, C**
3. **B**
4. **C**
5. **D**
6. **B**
7. **A**
8. **B**
9. **C**
10. **B**
11. **D**
12. **A**
13. **B**
14. **A**
15. **A**
16. **B**
17. **B, C**
18. **C**
19. **B**
20. **D**
21. **D**
22. **B**
23. **C**
24. **B**
25. **C**
26. **A**
27. **D**
28. **A**
29. **D**

ANSWERS EXPLAINED

1. **(B)** Packets can arrive at the receiving computer out of order. TCP protocol will arrange the packets in order based on the packet number. Since packets can follow any path and often will choose different paths in the same data stream, they will travel different distances and require different times to reach the receiving computer.

2. **(B), (C)** Internet standards are free and available to any company wanting to connect their products to the internet. These open protocols ensure that hardware and software developed by different companies can communicate with each other on the internet. The changing nature of the internet requires that protocols be flexible and dynamic. The internet protocols are designed to benefit the internet community, not one particular company.

3. **(B)** Transmission control protocol (TCP) is a protocol that defines how computers send packets of data to each other. Data traveling in the internet is broken down into small chunks of data called packets. TCP protocols guide the rules on how data are subdivided into packets before transmission.

4. **(C)** Internet protocol (IP) is responsible for addressing and routing packets on a network.

5. **(D)** TCP gives a guarantee that the order of data at the receiving end is the same as on the sending end, while UDP has no such guarantee. UDP is frequently used for live broadcasts and online games. UDP is faster than TCP but is less accurate.

6. **(B)** Open, nonproprietary communication protocols are used so that any computing device can communicate with another computing device. If the standards were not openly shared, using devices made by different companies would be more difficult.

7. **(A)** Utilizing protocols that are not current means that most web browsers would be incompatible. This makes no sense for a website, which typically requires as many people as possible to be able to view it.

   (B) There is no legal body that controls the boundaries of current protocols.

   (C) Major companies, such as Google, are creating new protocols and web standards using current technology, which can lead to some differences between browsers.

   (D) ISPs rarely filter based on the website's behavior; ISPs block only if websites are reported or contain banned content.