

Packets, the Web & Fault Tolerance

Name: _____ Period: _____ Date: _____

Objectives

- Explain how data are sent through the Internet in packets (CSN-1.C).
- Distinguish the Internet from the World Wide Web (CSN-1.D).
- Explain redundancy and how it makes the Internet fault-tolerant (CSN-1.E).

Directions: Answer each section. Diagrams are welcome where they help.

Section 1: Packets and Data Streams

1. Information travels the Internet as a data stream broken into _____.
2. Besides a chunk of data, what else does a packet contain, and what is it used for?

3. Packets sent from one computer to another may arrive in three ways. List them.

4. Name two common protocols used to send data on the Internet.

Section 2: The Internet vs. the World Wide Web

5. Explain the difference between the **Internet** and the **World Wide Web**.

6. Which protocol does the World Wide Web use to transfer web pages?

Section 3: Redundancy and Fault Tolerance

7. Define **redundancy** in a network.

8. Define **fault-tolerant**. Why is fault tolerance important for a system as large as the Internet?

9. How does having *more than one path* between two devices make the Internet more reliable?

10. If a router on the usual path fails while data is being sent, what happens to the rest of the data (if possible)?

Section 4: Benefits and Trade-offs

11. Redundancy usually requires something extra. What is the cost, and what is the benefit?

12. You are asked to find a **vulnerability** in a small network where two offices are connected by a single cable. What is the vulnerability, and how could redundancy fix it?
