

4.1 The Internet

Name: _____ Class: _____ Date: _____ **Total: 9 marks**

KEY WORDS internet 互联网 • packets 数据包 • world wide web 万维网 • protocols 协议

Objective

Build the skills to answer exam questions on **the Internet**.

You must be able to:

- explain how the **Internet** 互联网 is a network of networks using shared **protocols** 协议
- describe how data is divided into **packets** 数据包
- explain the role of an **IP address** IP 地址
- distinguish the **Internet** from the **World Wide Web** 万维网

1 Worked examples

Study these first. Each one shows the method for a question type used later.

■ **The Internet**

A **network of interconnected networks** that communicate using shared **protocols** (agreed sets of rules).

■ **Packets and IP addresses**

Data is split into **packets** that travel **independently** and are **reassembled** at the destination. An **IP address** identifies each device on the network.

■ **Internet vs Web**

The **World Wide Web** is a **service** (of web pages) that runs **on** the Internet — they are not the same thing. **Redundant** paths help data reach its destination reliably.

2 Practice

2.1 Define the Internet. [1]

2.2 State what a packet is. [1]

2.3 State the difference between the Internet and the World Wide Web. [2]

3 Exam-style questions

3.1 An IP address is used to [1]

- **A** compress data
- **B** identify a device on the network
- **C** sort packets
- **D** encrypt a file

3.2 Data sent over the Internet is divided into [1]

- **A** bytes only
- **B** packets
- **C** pixels
- **D** strings

3.3 A file is sent across the Internet.

(a) State how it travels. [1]

(b) State what a protocol is. [1]

(c) State one benefit of redundant network paths. [1]

Solutions

2.1 a network of interconnected networks that use shared protocols.

2.2 a small piece of data that travels independently and is reassembled at the destination.

2.3 the Internet is the network of networks; the World Wide Web is a service of linked pages that runs on it.

3.1 B.

3.2 B.

3.3 (a) as packets that travel independently and are reassembled. (b) an agreed set of rules for communication. (c) data can still reach its destination if one path fails.