AP COMPUTER SCIENCE PRINCIPLES • EXERCISE SHEET

5.4 Crowdsourcing

Name: _____ Class: _____ Date: _____ **Total: 8 marks**

KEY WORDS crowdsourcing 众包 • citizen science 公民科学 • quality 质量 • encryption 加密

Objective

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

You must be able to:

- explain how **crowdsourcing** 众包 obtains input from a large group
- describe how the Internet **enables** crowdsourcing at scale
- identify examples such as **citizen science** 公民科学, reviews, and collaborative funding
- recognize challenges such as reliability and **quality** 质量 control

1 Worked examples

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

■ Crowdsourcing

Obtaining input, ideas, or content from a **large group of people**. The **Internet** enables it on a global scale.

■ Examples

Citizen science (the public helps classify data), product **reviews**, and collaborative **funding**.

■ Benefits and challenges

Benefits include **diverse contributions** and shared effort; challenges include the **reliability** and **quality control** of crowdsourced data.

2 Practice

2.1 Define crowdsourcing. [1]

2.2 Give one example of crowdsourcing. [1]

2.3 State one challenge of crowdsourced data. [1]

3 Exam-style questions

3.1 Crowdsourcing obtains input from [1]

- **A** one expert
- **B** a large group of people
- **C** a single computer
- **D** no one

3.2 Crowdsourcing is enabled at a global scale by [1]

- **A** the Internet
- **B** encryption
- **C** a compiler
- **D** a single server

3.3 A science project asks the public to classify photos of galaxies.

(a) Name this practice. [1]

(b) State one benefit. [1]

(c) State one challenge. [1]

Solutions

2.1 obtaining input, ideas, or content from a large group of people.

2.2 any one of: citizen science, online reviews, crowdfunding.

2.3 the reliability or quality of the contributed data.

3.1 B.

3.2 A.

3.3 (a) citizen science (a form of crowdsourcing). (b) many diverse contributors share the effort. (c) ensuring the data is reliable and good quality.