

4.1 Ethical and Social Issues Around Data Collection

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

KEY WORDS data 数据 • privacy 隐私 • bias 偏见 • consent 同意 • array 数组

Objective

Build the skills to answer exam questions on **ethical and social issues around data collection**.

You must be able to:

- describe how programs collect, store, and use large amounts of **data** 数据
- explain why **privacy** 隐私 matters when personal data is gathered
- discuss the risk of **bias** 偏见 when a data set is unrepresentative

1 Worked examples

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

■ Data and privacy

Programs can collect, store, and process **huge** amounts of data. When that data is **personal**, **privacy** matters — it can be misused if exposed or shared without consent.

■ Bias in data

If a data set does **not represent everyone fairly**, conclusions drawn from it can be **biased**, harming under-represented groups.

2 Practice

2.1 State why privacy matters when collecting personal data. [1]

2.2 State one risk if a data set does not represent everyone fairly. [1]

2.3 State one responsibility when handling collected data. [1]

3 Exam-style questions

3.1 A data set that leaves out some groups can introduce [1]

- | | |
|---|---|
| A | B |
| C | D |
- A speed
 - B bias
 - C encryption
 - D an array

3.2 Collecting personal data raises concerns about [1]

- | | |
|---|---|
| A | B |
| C | D |
- A privacy
 - B compilation
 - C casting
 - D recursion

3.3 An app collects users' location data.

- (a) State one privacy concern. [1]
- (b) State one risk of an unrepresentative data set. [1]
- (c) State one safe practice for handling the data. [1]