1.5 Cost-Benefit Analysis

Name: ______________ Class: __________ Date: ____________ **Total: 10 marks**

KEY WORDS sunk cost 沉没成本 • implicit costs 隐性成本 • explicit costs 显性成本 • opportunity cost 机会成本 • resources 资源

Objective

Build the skills to answer exam questions on **cost-benefit analysis**.

You must be able to:

- explain that rational decision-makers weigh **total benefits** and **total costs**
- distinguish **explicit costs** 显性成本 from **implicit costs** 隐性成本
- apply the rule that an action is worthwhile only if its benefits at least equal its costs
- explain why **sunk costs** 沉没成本 should be ignored

1 Worked examples

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

The decision rule

Undertake an action only if its **total benefit** is at least as large as its **total cost**.

Explicit vs implicit costs

Explicit costs are out-of-pocket payments; **implicit** costs are the opportunity cost of resources you already own (e.g. wages you could earn elsewhere).

Ignore sunk costs

A **sunk cost** is already spent and cannot be recovered, so it should **not** affect the decision going forward — only future costs and benefits matter.

2 Practice

2.1 State the rule for deciding whether an action is worthwhile. [1]

2.2 State the difference between explicit and implicit costs. [2]

2.3 Explain why sunk costs should be ignored in decisions. [2]

3 Exam-style questions

3.1 A sunk cost is one that [1]

- **A** can be recovered
- **B** cannot be recovered
- **C** is always small
- **D** is really a benefit

3.2 The implicit cost of running your own business includes [1]

- **A** the rent you pay
- **B** the wages you could have earned elsewhere
- **C** your electricity bills
- **D** the materials you buy

3.3 A firm has already spent $10 000 on a project (unrecoverable). Finishing it costs $3000 more and earns $4000.

(a) State whether it should finish the project. [1]

(b) Explain, correctly ignoring the sunk cost. [2]

Solutions

2.1 proceed only if the total benefit is at least as large as the total cost.

2.2 explicit costs are out-of-pocket payments; implicit costs are the opportunity cost of resources you already own.

2.3 they are already spent and cannot be recovered, so they do not change the future benefits or costs of the decision.

3.1 **B**.

3.2 **B**.

3.3 (a) yes, it should finish. (b) the \$10 000 is sunk and irrelevant; the extra benefit (\$4000) exceeds the extra cost (\$3000), so finishing adds \$1000 of net benefit.