A-LEVEL ECONOMICS • EXERCISE SHEET

7.1 Utility

Name: ____________ Class: ________ Date: __________ **Total: 24 marks**

KEY WORDS utility 效用 • marginal utility 边际效用
• diminishing marginal utility 边际效用递减 • equi-marginal principle 等边际原则
• total utility 总效用

Objective

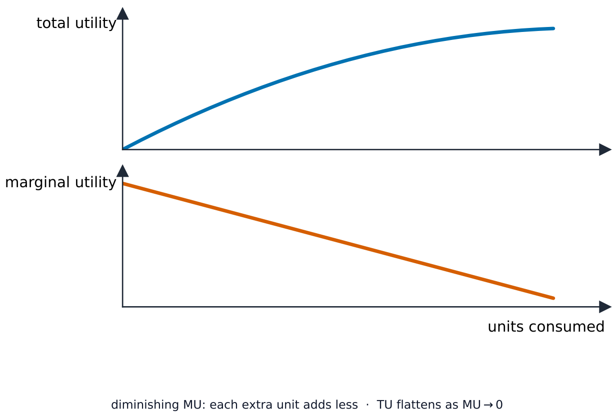
Build the skills to answer exam questions on **utility 效用** — **total and marginal utility 总效用与边际效用**, **diminishing marginal utility 边际效用递减**, and the **equi-marginal principle 等边际原则**.

You must be able to:

- define total and marginal utility
- explain diminishing marginal utility and why demand slopes downward
- apply and evaluate the equi-marginal principle

1 Worked examples

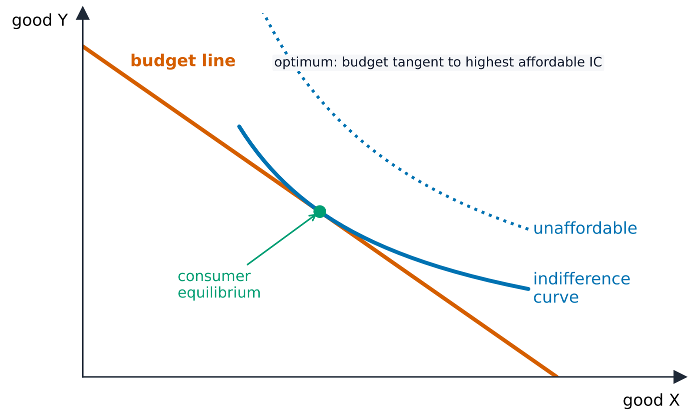
Utility and consumer choice



Each extra unit adds less satisfaction — so buyers pay less for later units

- **Total utility 总效用:** satisfaction from all units; **marginal utility 边际效用:**

satisfaction from one more unit.
- **Diminishing marginal utility 边际效用递减:** each extra unit adds less → demand slopes **down**.
- **Equi-marginal principle:** utility is maximised when $\dfrac{MU_A}{P_A} = \dfrac{MU_B}{P_B}$.



The same utility-maximising choice shown with indifference curves and a budget line

Answer shapes: AO1 + AO2 + AO3 (analysis) + AO4 (judgement, for evaluate questions).

2 Practice

2.1 Define the term *marginal utility.* [2]

2.2 State the law of diminishing marginal utility. [2]

2.3 State the equi-marginal condition for two goods A and B. [1]

3 Exam-style questions

3.1 A consumer maximises total utility from two goods when: [1]

- **A** the price of each good is equal
- **B** the marginal utility of each good is equal
- **C** the marginal utility per dollar spent on each good is equal
- **D** total utility from each good is equal

3.2 Explain how diminishing marginal utility helps explain the downward-sloping demand curve. [6]

3.3 Discuss the usefulness of marginal utility theory in explaining consumer behaviour. [12]

Solutions

Economics answers are marked by **level of response** against the assessment objectives: award **AO1** knowledge, **AO2** application, **AO3** analysis and **AO4** evaluation.

2.1 the extra satisfaction (utility) gained from consuming one more unit of a good (2 for a clear definition; 1 for a partial idea).

2.2 as more of a good is consumed, each extra unit gives less extra satisfaction than the one before (2 for a clear statement; 1 for a partial idea).

2.3 $\frac{MU_A}{P_A} = \frac{MU_B}{P_B}$ (1).

3.1 **C**. Utility is maximised when the marginal utility per dollar is equal across goods.

3.2 *[6]* AO1 1 + AO3 up to 5 — each extra unit gives less marginal utility, so it is worth less to the consumer → they will only buy more units if the price is lower → quantity demanded rises as price falls → the demand curve slopes downward.

3.3 *[12]* AO1/AO2/AO3 up to 8 + AO4 up to 4. **Useful:** it explains the downward demand curve and consumer equilibrium, and underpins the idea of consumer surplus. **Limits:** utility cannot be measured in numbers, consumers do not calculate like this, and it ignores habit, advertising and bounded rationality. Judgement: the theory gives useful insight into choice, but behavioural factors mean it is a simplification — its value depends on the decision being modelled.