AP MICROECONOMICS • EXERCISE SHEET

2.6 Market Equilibrium and Consumer and Producer Surplus

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

KEY WORDS surplus 过剩 • equilibrium 均衡 • consumer surplus 消费者剩余 • producer surplus 生产者剩余 • allocative efficiency 配置效率

Objective

Build the skills to answer exam questions on **market equilibrium and consumer and producer surplus**.

You must be able to:

- determine the **equilibrium price** and **quantity** where demand meets supply
- calculate **consumer surplus** 消费者剩余 and **producer surplus** 生产者剩余
- define **total surplus** 总剩余 and explain **allocative efficiency** 配置效率

1 Worked examples

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

■ Surplus areas

- **Consumer surplus** = area **below** the demand curve and **above** the price (what buyers gain).
- **Producer surplus** = area **above** the supply curve and **below** the price (what sellers gain).

■ Allocative efficiency

Total surplus (CS + PS) is greatest at the competitive equilibrium, where **marginal benefit** equals **marginal cost** — the allocatively efficient quantity.

2 Practice

2.1 Define consumer surplus. [1]

2.2 Define producer surplus. [1]

2.3 A good sells at \$10; a buyer was willing to pay \$16. Find the consumer surplus on that unit. [1]

3 Exam-style questions

3.1 Consumer surplus is the area [1]

- **A** above the demand curve
- **B** below demand and above the price
- **C** below the supply curve
- **D** above the price and below supply

3.2 A competitive market is allocatively efficient where [1]

- **A** $MB > MC$
- **B** $MB = MC$
- **C** $MB < MC$
- **D** the price is zero

3.3 In a market, the equilibrium price is \$8. On one trade, the seller would accept \$5 and the buyer would pay \$12.

(a) Find the producer surplus on that trade. [1]

(b) Find the consumer surplus. [1]

(c) Find the total surplus. [1]

Solutions

2.1 the difference between what buyers are willing to pay and what they actually pay.

2.2 the difference between the price sellers receive and the lowest they would accept.

2.3 $16 - 10 = \$6$.

3.1 B.

3.2 B.

3.3 (a) $8 - 5 = \$3$. (b) $12 - 8 = \$4$. (c) $3 + 4 = \$7$.