AP MICROECONOMICS • EXERCISE SHEET

4.2 Monopoly

Name: ______________ Class: __________ Date: ____________ **Total: 8 marks**

KEY WORDS monopoly 垄断 • deadweight loss 无谓损失 • natural monopoly 自然垄断

Objective

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

You must be able to:

- explain why a **monopoly 垄断** is a price maker whose **marginal revenue** lies below its demand
- determine the profit-maximizing quantity and price using $MR = MC$
- identify the **deadweight loss 无谓损失** a monopoly creates
- describe a **natural monopoly 自然垄断**

1 Worked examples

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

Price maker

To sell more, a monopolist must **lower its price** on all units, so **marginal revenue lies below** the demand curve.

Profit maximization

Produce where $MR = MC$, then read the **price** off the **demand** curve above that quantity.

Inefficiency and natural monopoly

A monopoly produces where $P > MC$, so it is **allocatively inefficient** and creates a **deadweight loss**. A **natural monopoly** has such large fixed costs that one firm is the least-cost producer.

2 Practice

2.1 State why a monopolist's marginal revenue lies below its demand curve. [1]

2.2 State the rule a monopolist uses to choose its quantity. [1]

2.3 State why a monopoly is allocatively inefficient. [1]

3 Exam-style questions

3.1 A monopoly maximizes profit where [1]

- **A** $P = MC$
- **B** $MR = MC$
- **C** $P = ATC$
- **D** $MR = 0$

3.2 A monopoly is allocatively inefficient because it produces where [1]

- **A** $P = MC$
- **B** $P > MC$
- **C** $P < MC$
- **D** $P = 0$

3.3 A monopolist produces where $MR = MC$ at $Q = 40$, charging $P = \$25$ (from demand), with $ATC = \$18$.

(a) Find the economic profit per unit. [1]

(b) Find the total economic profit. [1]

(c) State why the monopoly creates a deadweight loss. [1]

Solutions

2.1 to sell an extra unit it must lower the price on all units, so the added revenue is less than the price.

2.2 produce where marginal revenue equals marginal cost.

2.3 it produces where price exceeds marginal cost, so some beneficial units are not made.

3.1 **B**.

3.2 **B**.

3.3 (a) $25 - 18 = \$7$. (b) $7 \times 40 = \$280$. (c) it underproduces (relative to $P = MC$), so mutually beneficial trades are lost.