4.1 Information and market power

Name: _____ Class: _____ Date: _____ **Total: 21 marks**

KEY WORDS asymmetric information • moral hazard

Information and market power

Objective

Distinguish adverse selection from moral hazard, solve the monopoly model with its welfare cost, and evaluate the policy responses to market power (syllabus 2.10–2.11).

1 Key knowledge and worked examples

Information and power toolkit. Asymmetric information fails markets through adverse selection (before the contract) and moral hazard (after). Monopoly: MR $= 70 - Q$ meets MC $= 10 + Q/2$ at $Q = 40$, price 50 on the demand curve; with ATC 30, supernormal profit $(50 - 30) \times 40 = 800$. The competitive benchmark $(60, 40)$ reveals the deadweight loss $\frac{1}{2} \times 20 \times 20 = 200$. Natural monopoly: regulate, do not fragment. CR4 from shares $40 + 25 + 15 + 10 = 90\%$.

2 Practice

2.1 Define asymmetric information and distinguish adverse selection from moral hazard by timing. [2]

2.2 Explain how a pooled insurance price causes adverse selection. [2]

2.3 Name any four barriers to entry that sustain monopoly. [2]

2.4 State the profit-maximisation condition and read the monopoly price from which curve. [2]

2.5 Market shares are 40, 25, 15, 10 and 10 percent. Calculate the four-firm concentration ratio and one limitation of the measure. [3]

3 Exam-style questions

3.1 *(Original.)* On AR $P = 70 - Q/2$, MR $P = 70 - Q$, MC $P = 10 + Q/2$ with ATC 30 at the profit-maximising output: find the output and price, calculate the supernormal profit, and find the deadweight loss against the competitive outcome. [5]

3.2 *(Original.)* A rail network has falling average costs over the whole market. Explain why fragmenting it would raise costs, and evaluate one regulatory response. [3]

3.3 *(Original.)* A bank's deposit insurance leads banks to lend more recklessly. Name the failure and one policy that limits it. [2]

Solutions

2.1 One party to a transaction knows more than the other (1). Adverse selection operates BEFORE the contract (the informed side self-selects badly); moral hazard AFTER it (the protected side takes more risk) (1).

2.2 A single pooled premium is a bargain for high-risk customers and a poor deal for low-risk ones (1), so low-risks drop out, the risk pool worsens, the price rises, and more low-risks exit – until only high-risks remain and the market for low-risk cover vanishes (1).

2.3 Any four of: legal barriers; patents; branding/marketing; control of essential resources; economies of scale; high start-up costs.

2.4 Produce where MR = MC; the price is read from the DEMAND (average revenue) curve at that output.

2.5 CR4 $= 40+25+15+10 = 90\%$. Limitation (any one): it misses foreign competition; it says nothing about contestability; it ignores interdependence among the top four.

3.1 MR = MC: $70-Q = 10+Q/2$ gives $60 = 1.5Q$, so $Q = 40$; price on AR: $P = 70-20 = 50$. Supernormal profit $= (50-30)\times 40 = 800$ per day. Competitive: $70-Q/2 = 10+Q/2$ gives $Q_c = 60$, $P_c = 40$. Deadweight loss $= \frac{1}{2}\times(60-40)\times(50-30) = \frac{1}{2}\times 20\times 20 = 200$.

3.2 With falling ATC, one network serves the whole market at the lowest average cost; splitting it into rivals duplicates the fixed network, raising each firm's average cost (natural monopoly). Regulatory response (any one, evaluated): price capping at marginal cost maximises output but may price below average cost and require subsidy; average-cost pricing breaks even but leaves some deadweight loss; state ownership aligns coverage with policy but weakens profit discipline.

3.3 Moral hazard (the insured party takes more risk after the contract). Limiting policy: deductibles/excesses so banks bear part of the loss; capital requirements; or regulation of lending standards.

Local review guidance: the MR = MC equation, then price on AR, then the two welfare points; (R1 3.2) the response named with BOTH its gain and cost; the failure named as moral hazard specifically. This is authored classroom guidance.