Each case takes a real market and analyses it with the graphs the exam asks for. Reading a familiar market through the model is what makes the model stick – and several of these industries appear in released free-response questions. 每个案例用考试模型分析真实市场。

Market structure

Pharmaceuticals under patent – legal monopoly — A patent grants exclusive production rights for a fixed period, creating a monopoly by law rather than by cost structure. Draw it: demand downward-sloping, marginal revenue below it, output where MR = MC, price read up to demand. The result is a price well above marginal cost, positive economic profit and a deadweight loss. The interesting part is the justification: without patents the drug might never be developed, because research costs are enormous and the marginal cost of manufacture is near zero, so competition would drive price to a level that never recovers the fixed cost. The case is the standard illustration that allocative inefficiency can be a deliberate policy trade-off, and that is exactly what an evaluation question wants.

Airlines on a busy route – oligopoly and price wars — A few carriers on the same route face interdependent decisions: each one's profit depends on what the others charge. Build the payoff matrix with two firms choosing high or low fares. Both charging high yields the best joint outcome, but each has an individual incentive to undercut, so low-low is the Nash equilibrium even though both would prefer high-high. The prisoner's-dilemma structure explains both why price wars break out and why airlines invest so heavily in loyalty schemes and frequency competition instead – non-price competition avoids the trap.

Coffee shops – monopolistic competition — Many sellers, easy entry, and differentiated products through location, atmosphere and brand. In the short run a distinctive shop earns economic profit; entry then shifts each firm's demand curve left until it is tangent to average total cost and profit is zero. Two exam-relevant results follow: price exceeds marginal cost, so the outcome is allocatively inefficient, and the firm produces below minimum average total cost, which is the excess capacity that characterises this structure. The empty tables at three in the afternoon are that excess capacity made visible.

Elasticity and incidence

Cigarette taxes – who actually pays — Demand for cigarettes is highly price inelastic because they are addictive and have few substitutes, while supply is relatively elastic. Draw the per-unit tax as a vertical shift and read off the incidence: the more inelastic side bears the larger share, so consumers pay most of a cigarette tax. Two consequences the exam asks for follow – the tax raises substantial revenue precisely because quantity falls so little, and for the same reason it is a weak instrument for reducing consumption in the short run. The long-run elasticity is larger, which is why the policy is defended on long-horizon grounds.

Rent control – a price ceiling in a real market — A binding ceiling below equilibrium creates a shortage, shown as the horizontal gap between quantity demanded and quantity supplied at the controlled rent. The exam wants the secondary effects too: search costs rise, non-price rationing appears (queues, discrimination, key money), and because supply is more elastic in the long run, the shortage grows over time as landlords convert or fail to maintain units. It is the clearest case for the distinction between short-run and long-run elasticity carrying the whole conclusion.

Externalities and public goods

Vaccination – a positive externality — A vaccinated person reduces transmission to others, so marginal social benefit exceeds marginal private benefit. Draw MSB above the demand curve; the market quantity where demand meets supply is below the socially efficient quantity where MSB meets MSC, and the welfare loss is the triangle between them. The corrective policy is a per-unit subsidy equal to the external benefit, which shifts private demand up to MSB. Note the symmetry with a negative externality – same diagram reflected – which is worth learning as one structure rather than two.

Congested roads and the common-pool problem — An uncongested road is non-rival, but a congested one is rival and still non-excludable without tolling, which makes it a common-pool resource rather than a pure public good. Each driver considers only their own travel cost and ignores the delay imposed on everyone else, so marginal social cost exceeds marginal private cost and the road is over-used. Congestion pricing internalises the external cost, which is why London and Singapore charge for entry. The case is a clean way to see that the classification of a good can depend on how heavily it is used.