1.1 Perfect competition, imperfectly competitive markets and monopoly

Total Marks

AQA 7136 · Calculator allowed · about 110 minutes · Write-in edition

Name: _____ Date: ____ / ____ / _____

Answer ALL questions. Show all your working.

1 A grocery market has thousands of independent small shops each selling similar but not identical products, with low barriers to entry.

(a) Identify which market structure this scenario most closely resembles, giving one reason. **(2)**

(b) Discuss one way this market structure might benefit consumers compared with a monopoly serving the same area. **(4)**

(Total for Question 1 is 6 marks)

2 Monopoly power and barriers to entry.

(a) Define monopoly power (market power). **(2)**

(b) State three barriers to entry that could allow a firm to sustain monopoly power. **(3)**

(c) Explain how high barriers to entry allow a monopolist to earn supernormal (abnormal) profit in the long run, unlike a firm in perfect competition. **(4)**

(Total for Question 2 is 9 marks)

3 A monopolist has a constant marginal cost of £20 per unit. At its profit-maximising output of 5,000 units per month, it sets a price of £35 per unit.

(a) Calculate the monopolist's total revenue and total variable cost at this output (assume marginal cost is constant and equal to average variable cost), and hence its contribution to profit before fixed costs. **(4)**

(b) Explain why a profit-maximising monopolist produces at the output where marginal cost equals marginal revenue (MC=MR), rather than where price equals marginal cost. **(4)**

(c) Explain why this monopoly outcome is considered allocatively inefficient compared with a competitive market outcome. **(2)**

(Total for Question 3 is 10 marks)

4 Price discrimination.

(a) Define price discrimination, and state the three conditions necessary for a firm to be able to price discriminate. **(4)**

(b) Using the example of railway tickets priced differently for peak and off-peak travel, explain why the firm charges a higher price to peak-time travellers. **(4)**

(Total for Question 4 is 8 marks)

5 Contestable markets.

(a) Define a contestable market. **(2)**

(b) Explain the concept of 'hit and run' entry in a contestable market, and how the THREAT of this affects the behaviour of an existing dominant firm. **(5)**

(Total for Question 5 is 7 marks)

6 Evaluate the view that the existence of monopoly power in a market is always against the interests of consumers.

(Total for Question 6 is 25 marks)

7 Oligopoly.

(a) State two characteristics of an oligopolistic market. **(2)**

(b) Explain why price is often relatively stable ('price rigidity') in an oligopoly, using the concept of the kinked demand curve. **(4)**

(Total for Question 7 is 6 marks)

Mark scheme · 1.1 Perfect competition, imperfectly competitive markets and monopoly

Question 1

(a) monopolistic competition **B1**

(a) because there are many sellers, products are differentiated (similar but not identical) rather than homogeneous, and entry barriers are low **B1**

(a) Answer: Monopolistic competition: many sellers, differentiated products, low entry barriers.

(b) with many competing sellers and low barriers to entry, no single firm can sustain significant supernormal profit or restrict output/raise price far above cost in the long run, unlike an unregulated monopoly **M1**

(b) this keeps prices closer to average cost and output higher than a monopolist (which restricts output at MC=MR) would choose, benefiting consumers through lower prices and/or more choice **A1**

(b) product differentiation also gives consumers a wider variety of similar goods to choose between, better matching diverse consumer preferences than a single monopoly product could **M1**

(b) (evaluative point) however, the smaller scale of each individual firm compared with a monopoly means consumers may not benefit from the same economies of scale/lower unit costs that a very large monopolist with significant market power might achieve **A1**

(b) Answer: Competitive pressure keeps price closer to cost and gives more variety, though it may sacrifice the scale economies a monopolist could offer.

Question 2

(a) the ability of a firm to influence or set the price of its product, i.e. act as a 'price maker' rather than a 'price taker' **B1**

(a) typically measured by a firm's market share or by the concentration ratio of the industry **B1**

(a) Answer: The ability to set price rather than take it, usually measured by market share/concentration ratio.

(b) economies of scale (an incumbent's large scale gives it a cost advantage new entrants cannot immediately match) **B1**

(b) legal barriers, e.g. patents, licences, copyright **B1**

(b) (allow) control of an essential resource, high sunk (unrecoverable) start-up costs, or strong brand loyalty **B1**

(b) Answer: E.g. economies of scale; legal barriers (patents/licences); high sunk costs or brand loyalty.

(c) in a competitive market, supernormal profit attracts new firms to enter, increasing supply and driving price down until only normal profit remains **M1**

(c) high barriers to entry prevent (or significantly limit) new firms from entering a monopolist's market, even when it is earning supernormal profit **A1**

(c) because entry is blocked, the monopolist's supernormal profit is not competed away **M1**

(c) so, unlike in perfect competition, the monopolist can continue to earn supernormal profit into the long run **A1**

(c) Answer: Barriers block the entry that would otherwise compete away supernormal profit, so it persists into the long run.

Question 3

(a) total revenue = 35 x 5000 **M1**

(a) = £175,000 **A1**

(a) total variable cost = 20 x 5000 = £100,000 **M1**

(a) contribution = revenue - variable cost = 175,000 - 100,000 = £75,000 **A1**

(a) Answer: Total revenue £175,000; total variable cost £100,000; contribution £75,000.

(b) a firm maximises profit at the output where marginal cost equals marginal revenue (the last unit produced adds exactly as much to revenue as it does to cost) **M1**

(b) for a monopolist, marginal revenue is less than price (AR) at every unit sold beyond the first, because to sell more it must lower the price on all units sold (the demand/AR curve slopes downward) **A1**

(b) this means the monopolist's profit-maximising output (where MC=MR) occurs at a lower output, and a higher price, than the allocatively efficient point where P=MC **M1**

(b) unlike a price-taking firm in perfect competition, the monopolist deliberately restricts output below the competitive level to keep price (and profit) higher **A1**

(b) Answer: MR<P for a monopolist, so MC=MR occurs at lower output/higher price than the allocatively efficient P=MC point.

(c) because price exceeds marginal cost (P>MC) at the monopolist's chosen output, so consumers value the marginal unit more than it costs to produce, but it is not produced **B1**

(c) this results in a lower output and higher price than the socially optimal level, creating a welfare loss (deadweight loss) relative to the competitive outcome **B1**

(c) Answer: P>MC at the monopoly output means allocative inefficiency and a deadweight welfare loss versus the competitive outcome.

Question 4

(a) charging different consumers (or groups of consumers) different prices for an identical good or service, where the price difference is not justified by a difference in the cost of supply **B1**

(a) the firm must have some degree of market/monopoly power (be able to influence price) **B1**

(a) the firm must be able to separate/identify different groups of consumers with different price elasticities of demand **B1**

(a) the firm must be able to prevent resale (arbitrage) between the groups **B1**

(a) Answer: Charging different prices for the same good; requires market power, separable groups with different PED, and no resale.

(b) peak-time travellers (e.g. commuters) typically have fewer alternatives, since they must travel at a specific time, so their demand is relatively price inelastic **M1**

(b) off-peak travellers (e.g. leisure travellers with flexible plans) have more alternatives (travel at a different time, use another mode), so their demand is relatively price elastic **A1**

(b) a profit-maximising firm charges a higher price to the group with the more price inelastic demand, since raising price on this group causes a proportionately smaller fall in quantity demanded **M1**

(b) this allows the firm to capture more consumer surplus from peak travellers (converting it into extra revenue/profit) than it could by charging a single uniform price to all travellers **A1**

(b) Answer: Peak travellers have more inelastic demand, so charging them more raises revenue with proportionately little loss of custom.

Question 5

(a) a market with low (or no) barriers to entry and exit, in particular low sunk costs **B1**

(a) firms can enter and leave freely/quickly, with little risk of losing money if they exit **B1**

(a) Answer: A market with low barriers to entry and exit, especially low sunk costs.

(b) hit and run entry describes a new firm entering a market to take advantage of existing firms' supernormal profit, then leaving again quickly (with minimal loss, because sunk costs are low) if the incumbent responds by cutting price **M1**

(b) because entry and exit are low-risk for a challenger, even a single dominant incumbent firm faces a constant THREAT of entry, not just actual competition from existing rivals **M1**

(b) to deter this threat, the incumbent firm may set price closer to average cost (limit pricing), earning lower (closer to normal) profit than an unthreatened monopolist would **A1**

(b) the incumbent may also be forced to behave more efficiently/keep costs down, since any inefficiency (X-inefficiency) could be exploited by a hit-and-run entrant **A1**

(b) as a result, the market can display competitive (contestable) outcomes for price, output and efficiency, even though it is dominated by only one or a few firms **A1**

(b) Answer: The threat of low-cost hit-and-run entry forces even a dominant incumbent to price near average cost and stay efficient.

Question 6

Level 5 Thorough understanding of how monopoly power can harm consumers (higher prices, lower output, allocative/productive inefficiency, potential X-inefficiency) AND of ways monopoly power can benefit consumers or society (economies of scale lowering costs/prices, dynamic efficiency from supernormal profit funding research and development, natural monopoly arguments). Clear, consistently applied economic theory and reasoning, applied to the context. Well-developed chains of analysis on both sides. A well-substantiated, logically justified judgement, explicitly weighing relevant criteria (e.g. static versus dynamic efficiency, the specific industry/market conditions, whether monopoly power is regulated). **21-25**

Level 4 Good understanding of both the costs and at least one benefit of monopoly power to consumers, applied appropriately. Clear chains of analysis for more than one point on both sides. An evaluative judgement is attempted, though the weighing of criteria may be less explicit or developed than at Level 5. **16-20**

Level 3 Reasonable understanding, but the answer may focus mainly on the costs of monopoly (or mainly the benefits) with only limited coverage of the other side. Some analysis is present but chains of reasoning may be incomplete. An evaluative comment is offered but may be asserted rather than fully justified. **11-15**

Level 2 Basic or descriptive knowledge of monopoly, with limited or no genuine two-sided coverage. Limited analysis, mostly identifying points without developing them. Little or no evaluation. **6-10**

Level 1 Isolated, generic or largely inaccurate statements about monopoly. Little or no relevant application, analysis or evaluation. **1-5**

Level 0 No relevant content. **0**

Indicative content:

- AGAINST consumers: a profit-maximising monopolist restricts output and charges a higher price than would prevail under competitive conditions (MC=MR rather than P=MC), leading to allocative inefficiency and a loss of consumer surplus (link to Question 3's MC=MR reasoning).
- AGAINST: the absence of competitive pressure may allow productive inefficiency (no need to produce at minimum average cost to survive) and X-inefficiency (organisational slack, higher costs than necessary, since there is no competitive discipline).
- AGAINST: a monopolist may use price discrimination (Question 4) to extract consumer surplus from different groups, capturing revenue that would otherwise have remained with consumers.
- AGAINST: high barriers to entry mean supernormal profit persists in the long run rather than being competed away (Question 2), representing a permanent transfer of surplus from consumers to the monopolist's shareholders.
- FOR (benefits to consumers): monopolies operating with significant economies of scale can produce at a lower average cost than many small competing firms could, potentially passing on some of these lower costs as lower prices than would exist under fragmented competition (the natural monopoly argument, e.g. utilities/infrastructure).
- FOR: supernormal profit gives monopolies the retained earnings/financial security to invest in research and development, potentially leading to dynamically efficient innovation that benefits consumers over time, more than a perfectly competitive firm earning only normal profit could afford.
- FOR: in natural monopolies with very high fixed/infrastructure costs (e.g. water supply, rail networks), a single large firm avoids wasteful duplication of infrastructure that competition would require.
- FOR: government regulation (e.g. price capping, profit regulation, or the threat of break-up under competition policy) can control potential abuses of monopoly power while retaining any efficiency benefits of scale, meaning monopoly power need not always translate into consumer harm in practice.
- A contestable market (Question 5) shows that even a single dominant firm may be forced to behave competitively if barriers to entry are low, so market STRUCTURE (concentration) alone does not guarantee harmful monopoly BEHAVIOUR.
- Justified evaluation: monopoly power is not ALWAYS against consumers' interests - the outcome depends on the extent of economies of scale relative to the size of the market, whether the industry is contestable, whether supernormal profit is genuinely reinvested to benefit consumers (dynamic efficiency) or simply extracted, and whether effective regulation/competition policy is in place; the strongest answers therefore reach a conditional judgement rather than an unqualified yes or no.

Question 7

(a) a small number of large firms dominate the market (a high concentration ratio) **B1**

(a) firms are interdependent: each firm's pricing/output decisions affect, and are affected by, the decisions of its rivals **B1**

(a) Answer: High concentration; interdependent firms.

(b) firms believe that if they raise their price above the current level, rivals will not follow, so they would lose a significant share of customers to competitors (demand is relatively elastic above the current price) **M1**

(b) firms also believe that if they cut their price, rivals WILL follow to avoid losing market share, so a price cut gains little extra market share but reduces revenue per unit (demand is relatively inelastic below the current price) **M1**

(b) this asymmetric expectation creates a 'kink' in the firm's perceived demand curve at the current price, with a discontinuity in its marginal revenue curve **A1**

(b) firms therefore have little incentive to change price in either direction, so prices tend to be 'sticky'/stable, and firms may compete instead through non-price competition (e.g. advertising, product differentiation) **A1**

(b) Answer: Asymmetric rival responses to price rises versus cuts create a kink in perceived demand, making prices sticky.