1.17 Price Discrimination and the Theory of Contestable Markets

Total Marks

AQA 7136 · Calculators not allowed · about 90 minutes · Write-in edition

Name: _____ Date: ____ / ____ / _____

Answer all questions. Fully explain any diagrams you are asked to draw. Spend about 90 minutes in total. Question 2 requires full sentence answers; other short questions may be answered in bullet points.

1 Define the 'limit pricing' strategy in the context of contestable markets, and explain one strength and one weakness of limit pricing as a deterrent to entry in a UK market such as regional transport.

(Total for Question 1 is 4 marks)

2 Evaluate the view that contestable markets always benefit consumers.

(Total for Question 2 is 25 marks)

3 Define the term 'price discrimination' in the context of markets such as rail fares or cinema tickets, naming the setting in your definition.

(Total for Question 3 is 2 marks)

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4 Explain, with a clear example for each, the three standard degrees of price discrimination in markets such as rail fares, cinema tickets and retail: first-degree, second-degree and third-degree price discrimination. Name the degree with each example and the market setting.

(Total for Question 4 is 6 marks)

5 Calculate and interpretation question. Context: A small cinema charges adults £10 for a ticket and students £7. A market study estimates that the price elasticity of demand for adults is -0.8 and for students is -1.6 at these prices. Explain whether the cinema is pricing optimally between the two groups in the sense of setting higher price where demand is less elastic. State the rule linking elasticity and mark-up over marginal cost in third-degree discrimination and explain in one sentence what the given elasticities imply about relative prices, assuming similar marginal cost across groups.

(Total for Question 5 is 8 marks)

6 Explain the key features of a perfectly contestable market, naming hit-and-run entry and the role of sunk costs, and state one implication for an incumbent firm's pricing behaviour.

(Total for Question 6 is 4 marks)

7 Analyse question worth 8 marks. Context: BritRail, a dominant regional rail operator, is considering introducing student discounts and off-peak cheap fares. Analyse why BritRail might choose to practise price discrimination in these two ways. Include at least two reasons and brief evaluation of each reason.

(Total for Question 7 is 8 marks)

Mark scheme · 1.17 Price Discrimination and the Theory of Contestable Markets

Question 1

defines limit pricing: incumbent sets price low enough to make entry unprofitable for potential entrants	**B1**
states strength: it can deter entry without permanent reduction of output, maintaining incumbent's market position	**M1**
develops strength with example: in regional transport, below-peak fares or capacity discounts may remove short-run profit opportunity for entrants	**A1**
states weakness: legal or regulatory scrutiny and commitment problems, and if entrants have lower costs or access to finance, limit pricing may not deter them	**B1**

Answer: Limit pricing is setting price low to make entry unprofitable. Strength: can deter entry and protect incumbent profits in the long run. Weakness: may be unsustainable or illegal, and entrants with low costs may still enter.

Question 2

Level 1 Basic statements about contestability or consumer benefits, limited explanation, few or no examples, little structure.	**1-5**
Level 2 Some accurate description of contestable market theory and possible consumer benefits, limited analysis of assumptions or real-world frictions, few examples and limited judgement.	**6-10**
Level 3 Clear explanation of contestability features and implications for pricing and efficiency, analysis of sunk costs and other frictions with relevant examples, starts to evaluate trade-offs, partial judgement supported by evidence.	**11-15**
Level 4 Well-developed analysis of how contestability can benefit consumers through lower prices, efficiency and dynamic effects, balanced discussion of real-world limits such as sunk costs, regulation and capacity constraints, and good use of examples and diagrams.	**16-20**
Level 5 Comprehensive evaluation: detailed analysis of theory and evidence, thorough consideration of assumptions and frictions, balanced discussion of implications for pricing, short-run and long-run welfare, innovation and market structure, and a well-supported, justified conclusion connecting theory to empirical or realistic examples.	**21-25**

Indicative content:

- Definition of a contestable market: free entry and exit, absence of sunk costs, hit-and-run potential.
- How perfect contestability can force incumbents to price competitively, delivering allocative efficiency similar to perfect competition.
- Role of limit pricing as a deterrent and how contestability can discipline conduct without many firms present.
- Real-world frictions: presence of sunk costs, regulatory barriers, licensing, access to distribution or slot constraints in transport, which reduce contestability.
- Examples: regional transport where infrastructure and regulatory access create sunk costs and capacity constraints; retail where shelf space or branding creates barriers; digital platforms where network effects and data create de facto sunk cost or switching costs.
- Implications for consumers: potential lower prices and greater choice if contestability is high, but possible short-run losses if incumbents cut quality to deter entry.
- Dynamic effects: contestable markets may encourage innovation if incumbents fear entry, but large fixed costs may favour incumbents investing in quality and innovation instead.
- Distributional and welfare considerations: consumer surplus may rise but producer surplus may fall; potential for strategic behaviour and regulatory concern about predatory pricing.
- Diagrams that may be used: simple representation of incumbent setting limit price at competitive level, or AD/AS style diagram is not needed; explanation of diagram points and labels.
- Judgement: contestability can benefit consumers in ideal conditions, but in many real markets frictions mean benefits are limited or uneven; policy and regulation matter in making markets more contestable.

Question 3

a firm charging different prices to different consumers or groups for the same product or service **B1**

the price differences are not explained by differences in production cost **B1**

Answer: Charging different prices to different consumers or groups for the same good or service in a market such as rail or cinema, where the price differences are not due to differences in the cost of supply.

Question 4

first-degree: charging each consumer their maximum willingness to pay, example given such as personalised auction or negotiated price for rare tickets **B1**

second-degree: price varies with quantity or version, example given such as bulk-buy discounts in retail or first-class versus standard-class rail tickets (versioning) **B1**

third-degree: market split into groups with different elasticities, example given such as student or senior discounts in cinemas or trains **B1**

each example states which consumers pay more and which pay less and why **B1**

one development point linking the degree to how it can increase firm profit or affect consumer welfare in the example **B1**

clear labelling of each degree as first, second or third **B1**

Answer: First-degree: personalised pricing such as auctions where each buyer pays their maximum willingness to pay. Second-degree: bulk discounts or first-class versus standard-class tickets where price varies by quantity or version sold. Third-degree: segmentation into groups with different price elasticities, e.g. student discounts for cinema tickets or peak commuter fares, where less elastic groups pay more.

Question 5

states the pricing rule: markup (P - MC)/P = -1/elasticity or price should be higher where demand is less elastic **M1**

applies rule qualitatively: since adult elasticity -0.8 is less elastic than student elasticity -1.6, adults should face a higher price relative to MC than students **A1**

notes assumption: marginal cost is similar across groups so differences in price reflect differing elasticities **M1**

concludes that charging adults £10 and students £7 fits the rule that the less elastic group (adults) pays a higher price **A1**

optional numeric demonstration: rearrange rule to show P/(P - MC) = -elasticity and note relative ratios without needing MC value **M1**

states implication: with elasticities -0.8 and -1.6, the adult group can bear a larger markup, so P_adult > P_student is appropriate **A1**

recognises caveat: other constraints such as preventing resale or legal restrictions or signalling may affect pricing **B1**

clear concluding sentence linking elasticity differences to the observed price differential **B1**

Answer: Rule: (P - MC)/P = -1/elasticity, so less elastic demand supports a higher markup. With adult elasticity -0.8 and student -1.6, adults should face a higher price than students, so £10 v £7 is consistent with optimal third-degree discrimination given similar MCs, subject to resale prevention and other constraints.

Question 6

identifies perfect contestability features: absence of sunk costs, free entry and exit, and access to the same technology for entrants **M1**

explains hit-and-run entry: potential entrants can enter when incumbents price above competitive level, make profit, and exit without loss **A1**

links sunk costs: if sunk costs are zero entrants can exit without loss, making the market contestable **M1**

implication for incumbents: they may set a price close to competitive price to deter entry, for example using limit pricing **A1**

Answer: Perfect contestability requires zero sunk costs, free entry and exit and equal access to technology; hit-and-run entry means entrants can exploit temporary supernormal profit and exit; therefore incumbents may set prices close to competitive levels to deter entry.

Question 7

identifies reason 1: increase total revenue by charging higher prices to less elastic groups (commuters) and lower prices to more elastic groups (students, leisure) **M1**

develops with mechanism: additional sales in the elastic segment may increase total profits if marginal cost is low for extra seats **A1**

identifies reason 2: capacity utilisation - off-peak discounts increase usage of otherwise empty seats, spreading fixed costs **M1**

develops with mechanism: higher utilisation lowers average costs, improving profitability and consumer options **A1**

identifies reason 3: competitive and strategic reasons, e.g. deter entry on peak routes or segment particular customers to reduce poaching **M1**

develops with evaluation: may reduce scope for entrants if prices are tailored to remove profit opportunities, but could invite regulatory scrutiny **A1**

provides brief counterpoint: administration costs, risk of arbitrage/resale, or customer resentment may limit gains **B1**

concluding judgement weighing benefits against costs and constraints, e.g. likely profitable if resale prevented and marginal costs low **B1**

Answer: BritRail may price-discriminate to increase revenue from less elastic commuters while filling spare capacity with off-peak discounts, and for strategic deterrence; these raise profit but are limited by resale risks, administrative costs and regulation.