EXPERT TUITION

Economics Questions By Topic:

**Oligopoly (3.4.4)
Mark Scheme**

A-Level Edexcel Theme 3

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Question Number	Answer	Mark
1	**Application 2** **Application 2** 1 mark for appropriate calculation /formula e.g. the sum of 5 largest figures = 190 239 (1) $\dfrac{190\ 239\ \text{(million)}}{276\ 700\ \text{(million)}} \times 100$ Answer = **68.8%** (Accept between 68% and 69%) **Award 2 marks for correct answer (68.8)**	**(2)**

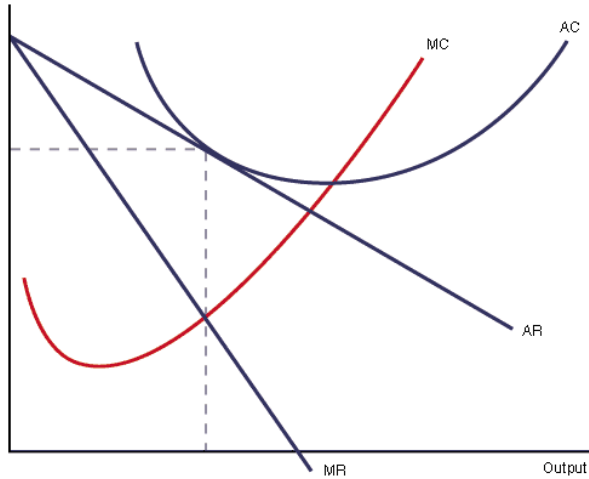| Question Number	Answer	Mark
2(a)	**Application 2** **Application:** 1 mark for applying the 3-firm concentration formula and 1 mark for accurate answer, e.g. **14.1+9.7+3.5 = 27.3** (1)**/47.6 x 100 = 57.4% (quarter 3, 2013)** (1) NB if the answer given is 57.4% award 2 marks.	**(2)**

Question Number	Answer	Mark
2(b)	C	**(1)**

Question Number	Answer	Mark
2(c)	**Knowledge 1, Analysis 1** **Knowledge/understanding:** 1 mark for identifying barrier to entry **Analysis:** 1 mark for a linked development, e.g. • economies of scale (1) large quantity for Apple, Samsung mean they are likely to reap marketing, purchasing economies (1) • limit pricing (1) where tablet producers lower price below profit maximisation to restrict entrance of competitors (1) • branding (1) significant marketing budgets spent by tablet manufacturers which it would be expensive for new entrants to afford (1) • patents (1) the technology including batteries will be protected meaning competitors cannot replicate (1) • sunk cost (1) costs a lot to invest in manufacturing units which small firms will not have the resources to do. (1)	**(2)**

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Question Number	Answer	Mark
3	Key: D	**(1)**
	Explanation: definition of collusion, e.g. firms work together, collaborate, agree on prices (1); explanation of price fixing, e.g. firms make an open or explicit attempt to work together (1); aim of collusion: to increase combined profits (1); collusion allows the firms to act as a monopolist (1); this might be shown in top left section of pay-off matrix (1+1);	
	application to context, e.g. prices will be fixed to make it more expensive for anyone wishing to gain the government contract (1);	
	illegal (1)	
	Example of knock out mark: it cannot be B because low barriers to entry would encourage other firms to enter at lower prices and compete away profits (1)	
	Example of knock out mark: not A because collusion implies revenues would stay at £1000 (1).	
		(3)

Question Number	Answer	Mark
4	Key: E	**(1)**
	Oligopoly definition, e.g. a few firms dominate the industry (1) Interdependence (1) Explanation of a price war, e.g. firms react to another firm's price cuts by cutting their own prices (1) Use of data to demonstrate that some firms dominate, e.g. Verizon has 34%, or use of a concentration ratio e.g. the 4-firm CR is 98% (1) Reasons why a price war is likely to occur (1+1). This might be developed using game theory: Use of pay off matrix to show short term reasons for a price war e.g. short term gains by under-cutting rival (1) and the effect, e.g. both firms lose revenue(1) Kinked demand curve (1) if interrupted MR curve is illustrated (1) Knock out of D: if (kinked) demand were relatively inelastic in relation to a price cut then this would be a reason NOT to lower price (1)	**(3)**

Question Number	Mark scheme	Mark
5	Key: B	1
	Definition of barrier to entry (1) e.g. an obstacle used to prevent new firms entering an industry	3
	Outline of how **predatory** pricing works (1) e.g. by making short term **losses** to force out firms	
	Concept of predatory or limit pricing can apply to barriers to entry and **keeping competition out** (1)	
	Firm makes a **loss** (1) which might be shown on a diagram (AR>AC over a quantity)	
	Other diagram marks: allow limit pricing if firm is pricing below AC of *other* firms (1)	
	Long run benefits or costs to firm (1) e.g. low prices prevent new firms from entering, higher profits for firms	
	Illegal or anti-competitive (1)	
	Example of knock out marks:	
	It is not C because a cartel is when firms act together as if they were one firm, and this would mean they do not have to undercut other firms	

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Question Number	Mark scheme	Mark
6	Key: D	1
	Definition or characteristics of monopolistic competition (1) *e.g. low or no barriers to entry or exit, slightly differentiated products, non-homogenous*	3
	Function of supernormal profits in terms of entry (1) e.g. profits attract new entrants	
	Normal profits are made in the **long run** (1) e.g. supernormal profits are eroded or competed away	
	Application to context (1) e.g. shoe repair services are very cheap to set up and very little equipment or training is required	
	Explanation that **normal profits** are where AR=AC or TC=TR or 'just enough profits to keep resources in their current use' (1).	
	Diagram showing AC=AR (1) (if not awarded above as a written definition of normal profits), where MC=MR and AR is downward sloping (1):	
	Revenue or costs (£)	
	Also award normal profit as TC=TR (verbal or on TR/TC diagram).	
	Example of knock out marks: It is not C because in the short run, before other firms can enter or leave the industry, supernormal profits (or losses) can be made (1)	

Question Number	Mark scheme	Mark
7	Key: B	1
	Explanation: Market share defined (1) e.g. the proportion of the sales relative to other firms	3
	Identification of first mover **dis**advantage (1) e.g. because Microsoft moves first it is at a disadvantage	
	Undercutting prices as a way to increase sales (1)	
	The goods are fairly close **substitutes** (1)	
	Firms are **interdependent** (1)	
	Pay off matrix (up to 2 marks) e.g. showing Sony benefitting from lower price (top right box) (1) Microsoft and Sony worse off (bottom right box) in long run equilibrium (1)	

Game theory 2x2 matrix

This is why Sony undercut Microsoft. Higher revenue and higher market share (1 mark).

Sony

	High Price	**Low price**
High price	A — Each gets £100m	B — Sony gets £120m Microsoft gets £50m
Low price	C — Sony gets £50m Microsoft gets £120m	D — Each gets £80m

Microsoft

This is the long run equilibrium (1 mark).

Example of knock out marks:

It's not C because demand is relatively elastic in the short term, or the firm would lose revenue (1)

It's not D because if they were colluding they would have sold at the same price

Question Number	Mark scheme	Mark
8	Key: D	1
	Definition or formula for concentration ratio (1) e.g. the largest 4 firms have x% of market power	3
	It is an **oligopoly** (1)	
	Highly concentrated (1) e.g. a figure above 50% would indicate strong power	
	Explanation of market power (1) e.g. firms can influence market price without losing a high proportion of sales	
	Relation or application to industry (1) e.g. there are reasons why **car** industry might be hard to operate in a more competitive scenario **or** 81.2% (within 1% range) of breakfast **cereal** market served by 4 main firms	
	The implications of the market power (1) e.g. higher prices, the firms might collude	
	Example of knock out marks:	
	It is not B because food retailers have high sunk costs in establishing trusted brand names	

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Question Number	Answer	Mark
9	**Correct Option A (1 mark)** Definition of oligopoly e.g. a few firms dominate the market (1) Supermarkets are **interdependent** (1) Other firms will follow if prices are cut (1) Firms will not follow if prices rise or other asymmetric reaction comments (1) Diagram showing a kinked demand curve with annotation or explanation of inelastic section for downward moving prices or elastic section for upward moving prices (1 +1) – Note kinked demand curve is not required Pay off matrix correctly showing that the firm will not change prices (1 + 1) Application – bread is regularly purchased and therefore easy to spot price changes (1) or often a loss leader (1) Example of a knock out: It's not C as if it is tacit collusion it has not been controlled by the regulator/competition authorities It's not D because supermarkets use non price competition such as loyalty cards and customer service schemes	(4)

Question Number	Answer	Mark
10	**E**	
	Definition or formula of AC or AVC (1) costs per unit, or variable costs per unit	
	Explanation of predatory pricing e.g. **losses made in short run** to remove competitors or deter new entry (1 mark).	
	Role of OFT/regulator (1)	
	Diagram (1): AR<AVC or AR<AC with loss shown	
	Shut down point: if firms cannot cover AVC they must stop production in the short run (except predator) (1) because they are not making a **contribution** to fixed costs (1)	
	Illegal (1)	
	Application in the context of bus services (1)	
	Role of fines (1) e.g. as a deterrent	
	Other long run implications, that prices will rise, choice will be reduced, profits will be increased (1)	
	Allow **up to 3 marks for the explanation** of wrong answers A and D, where candidate has read the question as a **limit pricing** question, i.e. simply to deter new entrants rather than to force other firms out. In these cases do not award the mark for the key but allow definition of allocative efficiency (if A is chosen) or revenue maximisation (if D is chosen)	**(4)**

Question Number	Answer	Mark
11	**A** Definition of cartel (1) e.g. a system of collaboration/collusion/agreement between firms, or, when individual firms act as a single firm in decision making Firms are operating in an oligopoly/interdependent (1) Correct application of payoff matrix showing short term profits for breaking collusion (1) Verbal analysis, for example using the explanation of the prisoners' dilemma, which may be illustrated by the payoff matrix (up to 3 marks): • show that collusion maximises joint profits/revenues (1) • incentive to **undercut** rival, e.g. if there is scope for gaining short term winnings at the expense of the other firm or firms (1). • long term equilibrium where both firms are worse off than if colluding (1) • incentive to form a new cartel (1) • price war might follow, other firm will copy (1) • other second round effects, e.g. breaking a collusive agreement can ruin the chance of future deals (1) Application or example (1) e.g. a country in OPEC might increase output against the agreement Illegal (1)	**(4)**

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Question Number	Answer	Mark
12	**C** Definition of collusion, e.g. collaboration, secret agreement (1) Identification of oligopoly/as in identification of top left box/interdependence/duopoly/prisoner's dilemma (1) Hanna Ltd undercuts Jax (1) Annotation of top right box to illustrate the answer (1) making short term gain, e.g. market share rises for Hanna (1) Hanna's revenue rises to £1200 or by £200(1). will probably lead to retaliation/Jax will cut price (1) where both end at £800 (this may be illustrated using kinked demand analysis, but this is not required) (1) Firms are better off colluding (1) Collusion is illegal/anticompetitive/leads to fines (1) Bottom right hand box is dominant strategy (allow Nash equilibrium) (1) illustrating price war (1)	**(4)**

Question Number	Answer	Mark
13	B Definition of overt collusion, e.g. that is spoken, open or traceable (1) application of text firms 'verbally agree' (1) which is a form of cooperation or collaboration(1) with rationale, e.g. that prices will be kept high or higher profits(1) application to PFI e.g. explanation of a tendering process (1) by private firms for government contracts (1) illegal (1) powers of competition policy e.g. fines (1) although sometimes hard to prove (1)	(4)

Question Number	Answer	Mark
14	C Definition of Concentration Ratio: the n firm CR is the proportion of the market controlled by the largest n firms or theoretical formula e.g. (Σ market share of n largest firms) Method mark 30.7% + 17.3% + 15.9% + 11.7% (1) The market is highly concentrated (1) Characteristics of oligopoly e.g. it means interdependence, a few firms dominate the market, or higher entry and exit barriers (or other definition of sunk costs) (1) with examples from grocery market e.g. advertising (1). Calculation of other concentration ratios: e.g. 3 firm 63.9% is a knock out mark (1) Application e.g. Tesco is a legal monopoly (1)	(4)

Question Number	Answer	Mark
15	D	
	Tacit collusion definition, e.g. that firms co-operate but not formally, or price leadership, or quiet or implied co-operation, secret, unspoken **(1 mark)**	
	Explanation that oligopoly involves interdependence or other characteristics, e.g. a few firms dominate the market. **(1 mark)**	
	Game theory: workable pay-off matrix **(1 mark)** initially with increased prices **(1 mark)** may be used to explain short term gains, e.g. one firm makes profit at the expense of another **(1 mark)** but long term further adjustment, or other use of prisoners' dilemma e.g. both have low prices, collusion breaks down, or Nash equilibrium **(1 mark)** n.b. Nash equilibrium is not required for full marks	
	Alternative approach: Kinked-demand curve analysis or price leadership may be used **(up to 3 marks**, of which, 1 mark for diagram, 1 mark for impact of increased prices described, 1 mark for impact of decreased prices described**)**	(4)

Question Number	Answer	Mark
16	C • Definition: sales maximisation is at output at which AR = AC which may be in diagrammatic form (1 mark) • Diagram showing outputs or prices for equilibria (1 mark) • Explanation that under sales maximisation lower prices or profits will deter new entrants or increase market share of the existing firm (1 mark) • Normal profits only will be earned (1 mark) • Accept analysis of limit pricing (1 mark) • Long run analysis e.g. sales max might equal long run profit max (1 mark)	(4)

Question Number	Answer	Mark
17	C Definition of high concentration, e.g. reference to a few firms having a high market share **(1 mark)** Calculation of three/four/five etc firm concentration ratio CR 3 = 45.2% CR 4 = 55.2% CR 5 = 64.4% CR 6 = 73.0% CR 7 = 80.7% **(1 mark)** Market structure is oligopoly **(1 mark)** Other reference to data, e.g. strong brand names **(1 mark)**	(4)

Question Number	Answer	Mark
18	A Price inelastic demand means that higher revenue for firms is gained when prices are higher **(1 mark)** Game theory: • Consumers have no choice but to pay the high prices because of market power **(2 mark)** • Possible collusion identification and application **(2 marks)** • Understanding that they tend not to trust each other and therefore they will most likely end up at cell D i.e. both low prices as a result of a price war **(2 marks)** Kinked demand approach: • Elastic demand if prices rise **(1 mark)**, but inelastic demand if prices fall **(1 mark)**. Diagram showing a kink in AR or demand **(1 mark)** Interdependence **(1 mark)**	(4)

END OF SECTION A

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Question Number	Answer	Mark
19(a)	**Knowledge 2, Application 2, Analysis 1**	
	NB an answer which sees highly concentrated as having a large number of firms will not earn knowledge or analysis marks	
	Knowledge and analysis: 3 marks for e.g.	
	• Identification of **high** concentration - high market share of some firms (1) few large firms dominate (1) uncompetitive (1)	
	• Identification of market structure - there is a *legal* monopoly (Walkers) **OR** oligopoly **OR** duopoly (1)	
	• Firms can set prices (1) control output (1) / monopoly power (1)	
	• Interdependent (1)	
	• High barriers to entry/exit (1) low contestability (1)	
	Application:	
	2 marks for data references e.g.	
	• Walkers have over 50% of market share (1)	
	• Use of concentration ratio e.g. 2 firm CR 78.0% (2), 3 firm CR 82.2% (2)	
	• Extract A refers to ban making market more competitive (1) implying prices are currently uncompetitive/high (1)	
	• Extract A – high levels of advertising (1)	
	• common features: they tend to be dominated by a small number of firms that sell multiple brands and that heavily advertise their products (1)	
	NB Concentration ratio calculation can be awarded as analysis or application	
	Award a maximum of 1 application mark if there is no reference to Figure 1 or Extract A	**(5)**

Question Number	Indicative content	Mark
19(b)	**Knowledge 2, Application 2, Analysis 4**	
	• Firms are interdependent so they will respond in the face of what other firms might do • Firms may not reach the same outcome as if they operated alone • Firms are cutting prices because they want to expand market share/steal other firms' markets • All firms responding in this way means that firms make less profit overall • Effects of advertising ban may make market more contestable, with possible effects on entrant • Price cuts could be a form of limit pricing, i.e. reducing contestability (effects on possible entrants may be shown) • **Game theory** e.g. a payoff matrix or kinked demand curve to illustrate behaviour, for example cartel-like or collusive behaviour, price leadership **NB to access Level 3 there must be correct use of game theory and application to the data.**	(8)

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	3–5	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	6–8	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

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Question Number	Indicative content	Mark
19(b) continued	**Evaluation 4** • Firms such as Walkers have significant market share and brand loyalty, even if competition lower price they may not switch • Use of context to show that firms are cutting prices because of a regulation and not because of the actions of other firms. No sign of interdependence. • Size of market shrinking overall so behaviour more aggressive • Firms setting low prices in a long run equilibrium might not the best option for the firms or other stakeholders. • Advertising ban affects children mainly - so price competition less needed for older target audiences that can still be targeted. • Reference to only 10% loss in sales compared to 15% - still a large impact on firms (Extract A).	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

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Question Number		Mark
20(a)	**Knowledge 2, Application 2, Analysis 1**	

	Knowledge/understanding and analysis:
	Oligopoly (1)
	OR
	Legal monopoly (1)
	OR
	Monopoly only if monopoly POWER is implied
	e.g. using CR calculation (1)
	OR
	Duopoly only if duopoly POWER is implied
	e.g. using CR calculation (1)
	
	AND
	Understanding of market structure identified,
	e.g. a market *dominated by* a few firms, or
	interdependent (1)
	Explanation of the process linking to the market
	structure to the action of firms e.g. high
	concentration means that firms may exhibit
	collusion, price rigidity, use of non-price
	competition, profits are not competed away (1)
	
	Application (1+1):
	2 marks for data references from Figure 1 and
	other sources (at least 1 mark must be related
	to Figure 1) e.g. Others 29%
	• Concentration ratio calculation e.g.
	  2 firm CR is 44%
	  3 firm CR is 53%
	  4 firm CR is 60%
	  5 firm CR is 66%
	  6 firm CR is 71% (2)
	• Costa (31%) is >25% market share (2)
	• Strong brand names, brand logos e.g. Caffè
	  Nero and Costa (1) have been dominating the
	  UK market Fig. 1/Extract A (1)
	• Market power is likely to be high (1) with
	  reason e.g. consumer loyalty (1) shown in
	  Figure 3 as price differences
	  tolerates/illustrate market power (1) coffee
	  has price inelastic demand (1) so people are
	  prepared to pay more (1)
		(5)

Question Number	Indicative content	Mark
20(b)	**Knowledge 2, Application 2, Analysis 4**	
	Pricing strategies - must be linked to **profit**, and may include:	
	• Price leadership/price matching – some brands seem very similar in pricing e.g. use kinked demand theory	
	• Predatory pricing	
	• Limit pricing (with view to higher future profits)	
	• Price wars (with view to higher future profits)	
	• Collusion/collaboration - reward the use of game theory/pay off matrix to support this	
	• Undercutting close rival e.g. Costa (with view to higher profits)	
	• Also award, if linked to profit: sales max, exploiting economies of scale, cost cutting, or competitive pricing linked to elastic demand, price rises and/or price discrimination	
	Non-pricing strategies – linked to **profit**, might include:	
	• Loyalty schemes, e.g. Starbucks only allow its own cup for reuse in store,	
	• Paying for central and expensive locations for stores	
	• Opening up new stores near to competitors to undermine the competition, e.g. at a London location there are many competitors	
	• Closing down non-profitable stores as rationalisation policy	
	• Strengthening the brand by advertising	
	• improving reputation for recycling washable cups/fair trade coffee, sharing with other brands not just Starbucks coffee cups which can be washed in store and re-used	
	• Extension of product range	
	• Focus on quality	
	NB Award collusion and BOGOF-style approaches as either pricing or non-pricing strategies.	
	NB For a Level 3 answer, there must be both price and non-price strategies, and reference to the context of *profitability* of *Starbucks*.	
		(8)

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	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	3–5	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response; chains of reasoning are developed but the answer may lack balance.
Level 3	6–8	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.

Question Number	Indicative content	Mark
20(b) continued	**Evaluation 4** • Weighing up of reasons for using price or non-price competition, e.g. • Not likely to use price competition - e.g. better to collude and keep higher joint profits. • Non-price competition can have very uncertain results/be expensive • Effects in the short run and long run might vary e.g. rising costs lead to falling profits, but long run demand rises leading to better results • Relative effectiveness of measures e.g. limit pricing may be static in long run and predatory pricing changes when other firms leave • Some of these strategies are illegal and could lead to fines, which might reduce overall profitability • Unstable nature of game theory equilibria • The effectiveness of the competition authorities might be considered e.g. regulatory capture • Depends on the strength of brand loyalty • Limitations of loyalty schemes, e.g. cost, consumer behaviour.	**(4)**

Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	3–4	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and/or is critical of the evidence.

Question Number	Indicative content	Mark
21	**Knowledge 2, Application 2, Analysis 2** • Define price and non-price competition. • Identify relevant price and non-price strategies suitable for Cineworld. • Application – competitors such as Odeon and Vue cinema. **Benefits and limitations of each can be taken as Knowledge, Application and Analysis, or Evaluation** • Price wars – lowering the price to attract customers from competition – increasing sales. • Predatory pricing – where a firm prices below AVC/AC of competitors – enables competitors to be driven out of the market and increases sales enabling the firm to drive up prices later. • Price leadership – where Cineworld sets its price first in order for competitors to follow – leading price may enable the firm to under-cut competitors for a time or push up the price as competitors follow. • Limit pricing – keep price low – to avoid firms contesting/entering market – lower price means higher output and sales, lack of competition means less fierce advertising and price reduction needed. **Types of non-price competition** • Advertising – this will raise awareness, interest, desire and action to increase sales of cinema tickets. • Branding – investing in the image, logo, slogan of the business – to build trust amongst customers.	
		(6)

Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–2	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no link between causes and consequences.
Level 2	3–4	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or the answer may lack balance.
Level 3	5–6	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using relevant and focused examples which are fully integrated. Economic ideas are applied appropriately to the broad elements of the question.

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Question Number	Indicative content	Mark
21 continued	**Evaluation 4** • Price wars – competitors may lower the price also meaning customers are the only ones to benefit, profit margins fall. • Predatory pricing – could get into legal trouble for trying to shut down competitor, if they have reserves they could last a long time driving down your own profits/ reserves. • Price leadership – Cineworld may increase price but competitors may not. • Limit pricing – low price means higher output but lower revenue and profit as not profit maximising. **Types of non-price competition** • Advertising – this will cost money, and may just encourage competitors to do the same making it more costly to remain in market. • Branding – may be a waste of funds as it may not encourage trust or brand loyalty. **Other evaluation** **Game theory** • Competitors likely to react and adjust price or advertising budgets/so could end up with both with lower price or higher costs in terms of advertising budget. • Pay off matrix may be used to show worst outcome for all. • Magnitude – depends on amount of price adjustment and advertising budget. • Prioritisation of the significance of each factor – whether pricing and non-price will be most important • Short run little change – people do not adjust to price changes straight away/long run may take time for benefits to emerge, e.g. branding.	**(4)**

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	0	No evaluative comments.
Level 1	1–2	Identification of generic evaluative comments without supporting evidence/ reference to context. No evidence of a logical chain of reasoning.
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Question Number	Answer	Mark
22(a)	Theory (2): oligopoly (1). A few firms dominate (1) or other explanation, such as interdependence, high barriers to entry/exit, highly concentrated. Allow monopolistic competition if referring to the fact that there are still 8000 small independent retailers still in the market (1 for identification and 1 for explanation of the theory, e.g. many small sellers). Application (2): 5 firm concentration ratio (1) is 56% (1), or similar Cartels, collusion, price fixing evidence Extract 1 – 'price coordination, prices going up and down together (1) Prices kept higher when costs falling (1);price discrimination with supermarkets and other retailers (1) Morrisons offering loyalty points – or other non-price competition (1) reduced number of sites implying some firms dominating (1) 'unfair pricing' (1); there are still 8000 small independent retailers – must be related to monopolistic competition (1) supermarkets have 45% of market. *There is scope for a monopolistic competition answer, with 8000 independent retailers, with differentiation of product and local brand loyalties, but this would have to be identified correctly. Do not award this answer from Extract 1 evidence. Do not award 'perfect competition'.*	**(4)**

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22(b)*	KAA (8) 2 + 2 + 2 + 2 or fewer points up to four marks each
	
	Strategies must be linked to 'increasing **profit**'. If not linked to profit, award identification mark only per factor.
	
	The strategies/development of game theory might include:
	
	• Pricing strategies – must be related to increased profit e.g. cut price, e.g. limit pricing, predatory pricing, sales max, rev max. These can count as more than one factor
	• Price competition, e.g. price wars, if linked to revenue
	• Improve quality, sales service, if linked to revenue
	• and other non-price competition, e.g. advertising, reinforcing brand, packaging, BOGOF, free gifts in petrol stations
	• Mergers and acquisitions
	• Award use of game theory to illustrate problems of increasing revenue/market share in oligopoly might involve discussion of interdependence, undercutting, kinked demand curve etc.
	• Other use of strategies mentioned in the question paper.
	
	Diagrammatic analysis could be included and rewarded.
	
	Evaluation (8):
	2 + 2 + 2 + 2 or fewer points up to four marks each
	    Some policies better than others in context of recession. It might not be possible to increase profits in the context
	
	    Unpredictability in oligopolies – game theory might be used to support this argument
	
	• Illegality of some policies, e.g. predatory pricing
	
	• Unstable outcomes/lack of information
	
	• Discussion of short run vs long run profitability
	
	• Difference between supermarkets and other petrol retailers. Different sectors will have very different strategies.
		(16)

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Question Number	Answer	Mark
23	**Theory: 2 marks** Firms are price makers, ability to set prices without losing all demand, price discrimination, relative inelastic demand or the use of a diagram to show a downward sloping demand curve, effectively the only supplier, there's no alternative, collusion Monopoly/oligopoly – a single or dominant firm (allow 25% legal definition) **Application (at least one reference to any information provided): 2 marks** 'Profiteering' or 'inflated prices' Extract 1 'not wanted to add extra miles' Extract 1 '15p above average price' Extract 1 'it's a complete monopoly' Extract 2 'notoriously expensive' Extract 2 'captive market' Extract 2 15 miles between MSAs or over 50 miles 'like an airport or railway station' Extract 2 'goldmine' Extract 3 'generate huge amount of cash' Extract 3 Concentration ratio from Figure 1 e.g. 3 firm CR = 87% (2 marks for correct calculation) Reduced number of options – HGV drivers forced to use MSAs	**(4)**

Question Number	Mark scheme	Mark
24	KAA 6 marks 3 x 2 marks or 2 x 3 marks Definition of price-fixing/collusion/anti-competitive behaviour (1) e.g. holding prices above competitive prices Example of anti-competitive behaviour (1) e.g. £30 per tin of milk in China compared to £10 in Britain Reasons why this behaviour might occur might include: • High market share of Wyeth and Nestlé, or 5 brands cover 60% of the market, so easy to maintain prices, or powerful brand names • Low PED because of safety concerns for babies • Weak competition authorities e.g. governments might focus on other issues, regulatory capture as the Chinese government gains large tax revenues/foreign funds • XED of domestic products, lack of substitutes domestically • Firms can communicate well/trust each other so they can collude easily. Game theory might be used.	12

Evaluation 6 marks 3 x 2 marks or 2 x 3 marks

This might be points that anti-competitive behaviour is difficult, or other evaluation points.

- 5 international firms is a high figure if trying to coordinate collusion/60% market share is not enough to fix prices
- PED is not so inelastic, e.g. black market in formula milk
- Tacit collusion may be occurring (hard to prove)
- Risks of whistleblowing e.g. game theory might be used to show it might or might not be worth colluding
- Problems of colluding e.g. game theory might be used to show there could be a breakdown of trust in the long run
- Degree of regulation, e.g. regulators are getting stronger, consideration of the size of fine £71m, increasing role of the NDRC gains power
- Might be a kinked demand curve so not actually collusion/price fixing e.g. Ext. 1 James Roy says it was unlikely it was 'real price fixing'
- Discussion of changes in Chinese market or government decisions over time e.g. if new Chinese competitors enter the market their reputation or quality might improve, or undercut international prices
- Discussion of collusion criteria that do not hold e.g. low barriers to entry

Question Number	Mark scheme	Mark
25(a)	**Theory 2**: Monopoly/oligopoly/duopoly (1); explanation e.g. where a few firms dominate the industry (1) or interdependent (1) or dominant sellers/legal definition 25% or more market share or highly concentrated (1)	4
	Application: Shimano and Schramm (1) keep prices high (1); battery costs represent 25% of the cost of e-bikes (1); "Almost all source from the same few supplies" (1) specialist equipment and design in manufacturing batteries (1); their power has stopped bike manufacturers 'squeeze out small competitors' Ext 3 line 12 (1) or small collection of battery firms implied (1)	

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Question Number	Mark scheme	Mark
25(b)	KAA 6 Marks	12
	Award up to 3 policies (2+2+2) or 2 policies up to 3 marks each.	
	Policies must be linked to increasing sales.	
	Pricing policies might include:	
	• Revenue maximisation	
	• Output max/sales maximisation	
	• Limit pricing or other reductions in price e.g.	

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discount price
- Price discrimination
- Predatory pricing – a deliberate strategy of driving competitors out of the market by setting very low prices or selling below AVC. Once existing firms have been driven out and entry of new firms deterred it can raise prices and increase revenue (OECD definition).
- Limit pricing – pricing by the incumbent firm(s) to deter entry or the expansion of fringe firms. The limit price is below the short run profit maximising price but above the competitive level (OECD definition).
- Profit maximisation (increasing revenue if not previously doing so – note that this is not automatically true)

Non-pricing policies might include:
- Advertising
- Loyalty schemes
- Sales promotions e.g. free helmet, 'deals' for multiple purchases
- Branding
- Collusion behaviour linked with higher sales.
- Mergers and other growth
- Quality improvements, e.g. 'attractive designs' Ext 3 line 4
- After-sales service

There must be at least one pricing and non-pricing policy, and clear application, or CAP at 4/6 KAA.

Evaluation 6 marks

Award up to 3 points (2+2+2) or 2 points up to 3 marks each.
- Drawbacks of chosen policies, e.g. how effective they are, illegal (this is allowed for predatory pricing, but is not always true for limit pricing – depends on whether it is anti-competitive)
- Market is growing so prices could be raised

| | | • Depends on the reaction of other firms. Game theory could be used to support the evaluation (also can be awarded as part of KAA)

• Standard weakness of policies, e.g. predatory pricing is illegal, might attract fines.

• Large assets purchases are not usually repeated in the short term therefore coupons or vouchers may not work. | |

Question Number	Answer	Mark
26(a)	Theory (2): Oligopoly (1) where a few firms dominate the market, or similar explanation (1) **OR** Monopoly (1) where one firm dominates the market/one firm with more than 25% market share (legal definition) Application (2): 2 firm concentration ratio of 61% (2) 3 firm CR of 75% (2) 4 firm CR 81% (2) 5 firm CR 83% (2) Other application (1 + 1) e.g. – Wrigley has 35% market share or Cadbury's has 26%(1) which is greater than the 25% legal minimum (1) other evidence of oligopoly behaviour e.g. strong brand names, collusive behaviour, barriers to entry, high sunk cost, high cost of research (1) Reserve one application mark for use of Figure 1	**(4)**

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Question Number	Answer	Mark
26(b)	Award up to 4 strategies (4x2 marks), or (3+3+2) or (2x4 marks) Strategies might include: • Pricing policies (may count as more than one strategy): predatory, limit pricing, sales max • Non-pricing strategies, e.g. heavy marketing (may count as more than one strategy) • Cross subsidisation • Existing firms might cut own costs • Collusion • New ideas might be developed to create barriers to entry • Other barriers to entry discussion • Merger & acquisition activity is likely e.g. new entrants being bought up • Challenge legal patents that have been awarded Award appropriate use of game theory to develop a point KAA CAP 6/8 if no reference to chewing gum manufacturers Evaluation 8 marks (4x2 marks), or (3+3+2 marks) or (2x4 marks): • there might not be a reaction – very small firm, already failing in US, niche market • Other magnitude points, e.g. size of profits of existing firms might mean that new entrants cannot compete in marketing • US market is unlike Europe market. Might be more room for growth in Europe or elsewhere. • Depends on whether we are in recession or growth (is the product a luxury?) • Discussion involving game theory can earn evaluation marks, e.g. the behaviour depends on the size of the payoffs • Size of fines, and magnitude of other legal powers • Critical judgement of strategies set out under KAA • Prioritisation with justification	16

Question Number	Answer	Mark
27	Award up to 4 strategies (4x2 marks), or (3+3+2 marks) or (2x4 marks) **Any comments regarding price discrimination are NOT permitted** Strategies MUST be linked to profit. These might include: • Pricing policies (may count as more than one strategy): predatory, limit pricing, cost-plus, BOGOF *if linked to profit* • Non-pricing strategies (may count as more than one strategy) e.g. heavy marketing, loyalty cards, good sales information, after sales service, friendly, photo albums, posters whilst you wait • Existing firms might cut own costs • New ideas might be developed to create barriers to entry • Other barriers to entry discussion • M&A activity is likely for new entrants being bought up • BOGOF (allowed if not used as a pricing strategy) Award appropriate use of game theory to develop a point KAA CAP 6/8 if no reference to high street retailers Evaluation 8 marks (4x2 marks), or (3+3+2 marks) or (2x4 marks): • it might not be possible to make profits – odds are stacked against high street stores as their costs are higher • Magnitude issues, e.g. size of cuts in number of stores by Jones is a significant shift in fixed costs • Depends on whether we are in recession or growth (camera is luxury, large part of income, YED issues etc) • Discussion involving game theory can earn evaluation marks, e.g. the behaviour depends on the size of the payoffs • Depends on the actions of other firms (game theory might be used) • Some practices are illegal e.g. predatory pricing • Cost of policies, e.g. advertising • The high street retailer can adapt to also become an online retailer • Critical judgement of strategies set out under KAA • Prioritisation with justification	(16)

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Question Number	Answer	Mark
28	KAA (8) 2 + 2 + 2 + 2 or fewer points up to four marks each 2 marks for correct pay off matrix, if correct and applied. Reasons might include: - Monopsony power of supermarkets, squeezing suppliers to retain their own margins - Need to keep prices low for customers in time of low incomes - highly competitive markets - high price elasticity of demand - Price leadership/collusion - Sticky prices/kinked demand analysis and possibly the discontinuous MR curve to illustrate why supermarkets are not raising their prices - to maintain market share - Eggs might be cross-subsidising other products in the supermarket such as loss leading milk - Allow arguments based on pricing strategies, e.g. limit pricing/predatory pricing, where cutting prices might be seen as keeping prices lower than they would have been. - Allow other non-pricing strategy reasons, 'non-price competition' such as branding, advertising e.g. The Happy Eggs company *If no game theory used award a maximum of 6/8 marks* Evaluation (8): 2 + 2 + 2 + 2 or fewer points up to four marks each - Depends on the degree of monopsony power - Difficult to assess the strength of monopsony power - It may be a matter of time before the higher egg prices feed through to consumers. - This might be explained with MC shifting out of the range of indeterminacy on the kinked demand model - The increase in cost are short term (£14 per hen) - Increased price might be outweighed by falling costs elsewhere. - Prices of eggs might rise as some producers leave the industry - Eggs are a small percentage of consumer costs/food producer costs - eggs have no close substitutes - collusion is illegal/risk of fines - Depends on the egg type as to how loyal the customers are (free range etc.) - Consideration of non-price strategies as an alternative to price changes - Other elasticity arguments, e.g. can firms change the PED of eggs in the future	(16)

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Question Number	Answer	Mark
29	Theory (2): oligopoly (1). A few firms dominate (1) or other explanation, such as interdependence, high barriers to entry/exit, highly concentrated Application (2): 6 firm concentration ratio (CR) is 99% (2 marks); or Big Six have 99% (1 mark), Other types of application (1+1): high barriers to entry/exit are applied, e.g. cost of setting up customer network, strong brand names, Big Six control 99% of market, other specific evidence of collusion, high profits as evidence of barriers to entry, small firms find it hard to enter the market, SSE cut prices 4.5% and BG will follow, price fixing of tariffs, £15bn combined profit, existence of regulator, BG supplies half of UK households, list of the six biggest firms	(4)

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Question Number	Answer	Mark
30	KAA (6) Award best 3 strategies applied to the industry of your choice: 2 + 2 + 2 or 3 + 2 + 1 or 3 + 3 Award appropriate use of game theory up to 6 marks, reserving at least 2 marks for game theory. If no game theory used the marks are capped at 4/6 KAA marks. This might take the form of: • 2 marks for a **suitable and applied** pay-off matrix • **explanation** of interdependent firms basing their decisions on likely reactions of other • undercutting or betraying rivals • prisoner's dilemma explained in context of consumer loyalty **Strategies** award the best 3 strategies. These might include: • price strategies (can count as more than one factor) e.g. predatory pricing, limit pricing, sales maximisation, if linked to loyalty, coupons, undercutting or raising prices • non-price strategies applied to the chosen industry (can count as more than one factor) e.g. advertising, BOGOF techniques: after sales service, loyalty cards, free delivery, online ordering, free gifts, guarantees, customer service, click and collect • product development e.g. linked goods • collusion – firms might fix a tendering process to ensure contractors stay with certain customers • merging – use of name such as Tesco can increase customer loyalty at convenience stores, or to remove competition If no reference to any industry then cap at 5/6 KAA marks. Evaluation (6) Award best 3 factors 2 + 2 + 2 or 3 + 2 + 1 or 3 + 3 • problems of pricing strategies. These might be explained using game theory, e.g. that price cutting might lead to a price war • cost and sometimes ineffectiveness of non-price strategies e.g. loyalty schemes cost money	**(12)**

42	- illegality of collusion/risk of fines/being subject to negative publicity - costs and other problems of merging, e.g. lack of synergies - short run/long run issues, e.g. how long does the loyalty last. Does it last as long as the offer runs? - External shocks to loyalty, e.g. bad publicity, 'horseburgers' - Kinked demand curve may be used - Other firms may simply copy strategy so the strategy won't work. Game theory equilibrium points could be used to develop the evaluation.	

Question Number	Answer	Mark
31(a)	**2 theory + 2 application** Knowledge (2 marks): Oligopoly (1 mark) where a few firms dominate the market (1 mark) Use of data (2 marks), with at least one mark for use of Figure 1. e.g. calculation of concentration ratio e.g. the 2-firm CR (1) is 35.6% (1) (1 + 1); referring to the 'Big Three' or 'Magnificent 7' Extract 1 (1).	**(4)**

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Question Number	Answer	Mark

31(b)*	**8 KAA + 8 evaluation**
	
	KAA 6 marks + 2 for petrol cost reference. This could be data reference line 38, or gas-guzzlers line 39 as attempt to reduce the amount of petrol used. Reference to battery powered car line 58-59 or hybrids may also be implicitly used, falling spending power after petrol costs and income elasticity arguments based on increased price of petrol.
	
	Mark breakdown: award best **four** points up to four marks each, with cap of 6 for KAA excluding petrol costs: e.g. 2+2+2, or 3+3 or 3+ 2+1 or 2+2+1+1 etc.
	
	There must be at least 1 pricing and 1 non-pricing policy. If one type is omitted then cap KAA 4/6 marks
	
	Strategies must be aimed at increasing sales **revenue**, at least in the long run
	
	Pricing strategies might include:
	    • Predatory pricing (must be linked to long run revenues),
	    • limit pricing (must be linked to long run revenues),
	    • profit maximisation (assuming the firm was not profit maximising and was operating at a lower revenue),
	    • sales/output maximisation,
	    • revenue maximisation,
	    • price discrimination
	    • collusion, can be used as pricing or non-pricing strategy
	
	Award development using discussion of PED.
	
	Non-pricing strategies might include:
	    • improving quality (reference to Toyota),
	    • trade exhibitions (Detroit Motor show 'parties in full swing')
	    • advertising,
	    • narrowing brands,	

- loyalty deals,
- mergers and acquisitions,
- collusion, can be used as pricing or non-pricing strategy
- use of patents,
- change in branding to 'modest' cars from 'gas guzzlers'

Award use of game theory to explain the process, e.g. collude then cheat

Reserve 2 KAA marks for application that rising petrol prices is dampening demand for cars

Evaluation 8 marks.
Award the best **four** points made, or fewer. 4 x 2 marks, 2 x 4 marks, or 3 + 2 + 2 + 1 marks
Reasons might include:
- why strategies might not increase revenues in the short or long run, e.g. price war. Award use of payoff matrix/kinked demand to show revenues fall
- action of the competition authorities, e.g. fines or imprisonment,
- game theory as a critique, e.g. it depends on the action by other firms
- discussion of PEDs in context of falling real incomes, after petrol price rises
- Discussion of degree of cross elasticity between cars and petrol, or degree of inelasticity of demand for cars, e.g. there is no viable alternative

Award use of game theory as evaluation, e.g. kinked demand curve shows that changing price does not raise revenue, or a payoff matrix to show that revenue does not rise in the long run if all firms follow the same strategy

(16)

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Question Number	Answer	Mark
32	**KAA 8 marks (award up to four points etc)** (2 + 2 + 2 + 2) or (3 + 3 + 2) or (4 + 4) Application (2): Barclays had used pricing information (1), but now they have reported it (1) Reasons might include: • To gain more market share (e.g. by cutting prices) • To damage RBS profits/image • To avoid being fined • To make more profit/revenue • Advantages of first mover If no reference to game theory or Barclays' changing behaviour then award a maximum of 6/8 KAA marks. For a well developed game theory analysis, 8/8 marks can be awarded. 2 marks for accurately labelled and contextual pay-off matrix, and 2 marks for discussion of prisoners' dilemma. **Evaluation (8) (award up to 4 points etc)** (2 + 2 + 2 + 2) or (3 + 3 + 2) or (4 + 4) • Firms unlikely to trust each other in future negotiations • Long term application of prisoners' dilemma – second rounds of the game • Problems in finding an equilibrium • Threat of fines and other actions by competition authorities might change the behaviour further • Not enough/inaccurate information provided • Use of game theory to evaluate is rewarded. • Kinked demand curve might be used to show why collusion is still more profitable • The may be other strategic reasons to break the agreement, apart from avoiding the fine • Discussion of why collusion is more likely in this market, in relation to market structure • Prioritisation of likely reasons, e.g. the fine is huge • Damage to brand image of Barclays in addition to RBS • Size of fine	**(16)**

Question Number	Answer	Mark
33(a)	**Theory 2 marks:** Identification of market structure (1) and characteristic (1): oligopoly – high levels of marketing, brand awareness, interdependence, a few firms dominate the industry, a high concentration ratio, high barriers to entry. Allow duopoly. Allow monopoly if linked to 25% market share. **Application 2 marks:** heavy use of marketing techniques, e.g. High levels of non-price competition and payment to search engines, bar chart illustrates five powerful firms, Danone and Yoplait are strong brand names, Danone and Yoplait dominate in the US, e.g. ''equally placed'. Lactalis' bid of $1.76bn in $3.7bn industry. (1 + 1 or 2 marks for a well developed application.	**(4)**

Question Number	Answer	Mark
33(b)*	**KAA 8 marks Award up to four factors 2+2+2+2 or 3+3+2 or 4+4** Points might include: Pricing strategies: - Competition might make firms increase output and reduce prices; - predatory pricing, - limit pricing, - sales max pricing, - collusion - Competition might drive down profits so firms may have to cut costs or raise price to retain profitability, - temporary offers to reduce prices, allow BOGOF Increased non-price competition, for example: - coupons, - advertising, - website development, - investment in quality, - widening product range, - loyalty schemes, - BOGOF, - mergers, - collusion - social networking sites There may be no reaction Some firms may leave the industry Generously award the use of game theory, but not required for this question. 2 marks for accurately labelled and contextual pay-off matrix. Cap at 6/8 marks if no use of data **Evaluation 8 marks Award up to four factors 2+2+2+2 or 3+3+2 or 4+4** Firms might keep prices stable (e.g. kinked demand analysis), increase advertising (increase costs); operating at a loss on some products might catch the attention of the competition authorities (fines etc) Evaluation might take the form of a critique of game theory or other approaches - Distinction between *all* yogurts and Greek yogurt	**(16)**

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	- Firms might keep prices stable (e.g. kinked demand analysis), increase advertising (increase costs); - operating at a loss on some products might catch the attention of the competition authorities (fines etc) - Other factors are not equal – e.g. in a recession the market may require higher levels of advertising or risk taking, or lower marketing costs if advertisers are keen to attract business - the reaction may be different in some countries than others, e.g. China vs US, or other use of data - predatory pricing/collusion illegal and would attract a large fine - barriers to entry e.g. economies of scale/reputation/advertising *Yoplait Greek* made a sudden but very significant entry into the market – they might leave just as quickly - Barriers to entry are low once the brand name Yoplait is already established, other contestability issues such as questioning the costs of setting up production of new product - There may be no reaction (can be used as an evaluative point as a critique) e.g. because the firms are interdependent (this might be developed using game theory or kinked demand analysis) - Comment on the efficacy of non-price competition, - Critical development using game theory, e.g. price war, prisoners' dilemma - Prioritisation, e.g. non-price behaviour is more likely because it is an oligopoly - importance of behaviour/need to respond in short run/long run	

Question Number	Answer	Mark

34	KAA (6 marks). Award up to 3 factors e.g. (2+2+2) or (3+2+1).
	Reserve at least 2 marks for reference to game theory, but up to 6 marks can be awarded for a fully grounded game theory answer.
	
	Factors might include:
	• Award use of game theory and pay-off matrix, or kinked demand analysis as up to 2 factors of which 2 marks are awarded for a pay-off matrix
	• Collusion
	• Price competition
	• Non-price competition
	• Reaching a worse outcome than if the decision was made independently, e.g. prisoners' dilemma
	• Internal growth
	• More mergers, the combined firm might be more competitive which may result in:
	   o Lower prices
	   o Reduce cost
	   o Synergies
	
	If there is no link (explicit or implicit) to increased market share/revenue then no marks are awarded for the point.
	
	Mark cap 4/6 marks if no reference to game theory.
	
	Evaluation (6 marks). Award up to 3 factors e.g. (2 + 2 + 2) or (3 + 2 +1).
	
	Factors might include:
	• Collusion is illegal – risk of fines. This may be developed using extensions of game theory.
	• Tacit or overt collusion?
	• Difficult to prove collusion
	• Mars is in very different markets, or other magnitude comments about the competition
	• Cost implications of non-price competition
	• Other factors not equal
	• A critique of points made in KAA
	• Difficult to increase market share by changing price. This may be shown using game theory/kinked demand
	• Lack of synergy which may lead to less market share (clash of cultures)
	• Long term cost problem of merger
		(12)

Question Number	Answer	Mark
35	KAA 8 marks award as (4x2 or 3+2+2+1) Award up to four strategies Allow any valid price strategies IF LINKED TO INCREASED PROFITABILITY albeit in the long run: • Limit pricing if linked to increased profitability • Revenue maximisation/sales max can only be awarded if linked to increased profitability, e.g. in the long run **Do not award identification marks for the above unless linked to profitability, because the strategies aim to lower profits.** • Predatory pricing • Collusion/price wars • Other game theory pricing strategies • Price discrimination • Cost-plus pricing • Penetration pricing • Allow profit maximisation as a pricing strategy Allow any valid non price strategies • Marketing/advertising e.g. celebrity endorsement (may be awarded as more than one factor) • Improved service e.g. delivery networks • Customer interface and apps • Mergers and acquisitions • Product re-design • Loyalty schemes • Free gifts • Other game theory non-pricing strategies • Lowering costs/increasing efficiency	(16)

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If only one type of strategy then award a maximum of 6/8 marks

Evaluation 8 marks. Award as (4x2 marks or 2x4 marks or 3+2+2+1 etc). Factors might include:

- The Times is already charging for use of articles and is a success/is not a success
- It is too early to say, certainly with The Times.
- Difficult to know outcomes in game theory, or other game theory critique, e.g. kinked demand curve to show sticky prices
- Award game theory responses as more than one point, e.g. price war
- Depends on changing income in a recession
- Global competition issues
- Discussion of relative merits of pricing and non-pricing strategies
- Possible intervention by the Competition Authorities
- Costs involved in redesigning and marketing the non-price strategies might outweigh benefits
- Advertising as a **sunk** cost

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Question Number	Answer	Mark
36(a)	**KAA 4 marks** Answers must be based on evidence of a cartel. Do not award reasons why there is a cartel, or why cartels might break down as analysis points. Meaning of cartel e.g. an agreement between firms to operate together (1 mark) Evidence (up to 4 marks). Award as 4 or 1+3 or 2+2 or or 2+1 or 1+1. Evidence might include: • Germany has 'highest prices in Europe' • Profits expected to rise despite recession • Price rising even though cost of coal has halved (line 17), and gas and oil prices have fallen sharply (line 5) • Demand for electricity expected to fall by 5% but prices are high and in some cases rising (lines 4-5) • Suggestion that power stations being shut to cut supply • Two companies (E.ON & RWE) dominate the industry. Award use of concentration ratios in lines 20-22 • Reference to European Competition Commission (ECC) as a sign of acting as a cartel (Award no more than 4 KAA marks) Evaluation 4 marks (4+0 or 3+1 or 2+2) might include: • It may be just tacit or informal collusion • Prioritisation with justification • Missing information – 'finding evidence of anti-competitive behaviour may be difficult' • Risks of collusion e.g. fines by the European Competition Commission might be greater or less than potential gains. This might involve game theory or regulatory capture. Cartels are illegal	(8)
	• Prices are high for other reasons, e.g. x-inefficiency, or other costs such as wage costs, or owing to reinvestment • Concentration ratio or prices are high for reasons other than the operation of a cartel, e.g. natural monopoly	

Question Number	Answer	Mark

36(b)	KAA 6 marks (of which 2 marks are reserved for game theory). If no reference to game theory there is a maximum of 4 KAA
	
	Award 6 KAA marks for good game theory which illustrates various ways to compete
	
	Consideration of game theory:
	• Explanation of strategies and best solution
	• Tacit agreements such as price fixing
	• Pay-off matrix
	• Kinked demand theory
	• Recognition of rival behaviour and interdependence
	• Prisoners' dilemma
	• Informal collusion
	• A pay-off matrix drawn accurately and applied to RWE and E.ON 2 marks
	
	Methods of competition include:
	   Price competition
	• Limit pricing
	• Predatory pricing
	• Sales maximisation
	
	   Non-price competition
	• networks to distribute electricity,
	• advertising,
	• marketing;
	• special discounts to other distributing companies
	• Mergers, collusion or other ways to remove competition can be seen as a way to compete
	
	Award best three points e.g. 4+2 or 3+2+1 or 2 + 2 + 2
	
	Do not award 'operating as a cartel', e.g. controlling
		(12)

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networks, or simultaneously shutting power stations lines 6-7.

Evaluation 6 marks. Award best three points, e.g. 3+3 or 3+2+1 or 2+2+2 etc.
- Regulator forcing companies to change their behaviour
- Difficulty of using non-price competition when product is homogeneous
- Critical assessment of game theory e.g. game theory leads to lack of competition not a way to compete
- Critical assessment of the method of competition
- Game theory shows that the worst outcome might be reached as illustrated by problems of Prisoners' Dilemma or price war
- What looks like competition might be the emergence of monopoly power, e.g. duopoly pricing
- Other critical assessment of game theory, e.g. lack of rationality, lack of information for consumers
- How credible is the threat? e.g. predatory pricing might not be effective, or there may be international competition making limit pricing ineffective
- Collusion is illegal
- Gains from collusion might outweigh the possible fines
- Collusion is difficult to prove, or other missing information

Quality of written communication will be assessed in this question based on the candidate's ability:
- To present an argument and conclude on the basis of that argument
- To organise information clearly and coherently
- To use economics vocabulary appropriately
- To use grammar, spelling and punctuation appropriately

Level	Mark	Descriptor
Level 1	1-3	Definition of game theory (1 mark); application – to 2 companies E.ON & RWE (2 marks)
Level 2	4-7	Definition of game theory (1 mark); application – to 2 companies E.ON & RWE (2 marks); other methods of competition (up to 3 marks); brief evaluation (1 mark)
Level 3	8-12	Definition of game theory (1 mark); application – to 2 companies E.ON & RWE (2 marks); other methods of competition (up to 3 marks); Evaluation: 2 x 3 marks or 3 x 2 marks (6 marks);

of that argument
- To organise information clearly and coherently
- To use economics vocabulary appropriately
- To use grammar, spelling and punctuation appropriately

Level	Mark	Descriptor
Level 1	1-3	Identification of policies and factors
Level 2	4-8	Identification of policies and factors (3 marks); explanation of each (up to 5 marks);
Level 3	9-16	Identification of policies and factors (3 marks); explanation of each (up to 5 marks). Evaluation (3+3+2 marks)

Question Number	Answer	Mark
37(a)	Theory 2 marks: oligopoly (1 mark) Explain: A few firms dominate the market; interdependent firms (1 mark) Application to market for instant coffee (2 marks) e.g. concentration ratio: 2 firm 68%, 3 firm 73%, 4 firm 76% (2 marks), or high levels of non-price competition, £17m investment by Nescafe is a barrier to entry, 20 year innovation period (Ext 2 line 19) (up to 2 marks) OR Theory 2 marks monopoly (1 mark) Explain: one firm has more than 25% of the market Application: 51% market share for Nescafe (2 marks), £17m investment by Nescafe is a barrier to entry (up to 2 marks) OR Duopoly (1 mark) Explain: two firms dominate market Application: concentration ratio 68%	(4)

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Question Number	Answer	Mark
37(b)	KAA 8 marks. Award a maximum of four points: (2 + 2 + 2 + 2 or 3 + 3 + 2 marks or 4 + 4 marks or 4 + 2 + 2 + 1) **Methods for US and UK** • Pricing strategies • Limit • Predatory • Sales maximisation • Non pricing strategies e.g. developing 'ethical' products or corporate social responsibility • Use of branding • Increased advertising expenditure • Avoidance of price wars (could use game theory) • Limit pricing – to deter new entrants • Merger activity to gain advantages such as economies of scale • Price competition: to increase market share • Development of new up-market brands to compete with filter coffee • Collusion or other ways to remove competition can be seen as a way to compete. If no application to UK <u>and</u> US then cap 6/8 KAA marks Evaluation 8 marks. Award a maximum of four points: (2 + 2 + 2 + 2 or 3 + 3 + 2 marks or 4 + 4 marks or 4 + 2 + 2 + 1) • High fixed cost associated with developing and marketing a new brand (and advertising) • Many new brands are unsuccessful • New brand might reduce market share of the company's existing brands • Short run and long run effects • Limit pricing would reduce profits, at least in the short run • Firms might avoid price competition because of the risk of a price war. Game theory could be used to show why they do not engage in competition • Some strategies will attract the attention of the competition regulators • Assessing the wider impact of the measures e.g. redundancies Quality of written communication will be assessed in this question based on the candidate's ability:	(16)

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- **To present an argument and conclude on the basis of that argument**
- **To organise information clearly and coherently**
- **To use economics vocabulary appropriately**

To use grammar, spelling and punctuation appropriately

Level	Mark	Descriptor
Level 1	1-3	Identification of methods
Level 2	4-8	Identification of methods (3 marks); explanation of each (up to 5 marks)
Level 3	9-16	Identification of methods (3 marks); explanation of each (up to 5 marks). Evaluation (3+3+2 marks)

Question Number	Answer	Mark
38(a)	**Theory (2 marks):** An oligopoly **(1 mark)** - at least reference to one characteristic **(1 mark)** **Application** to pharmaceutical industry **(2 marks):** identification of characteristics in evidence provided	**(4)**

Question Number	Indicative content
38(b)	6 KAA marks or which **(3 marks)** for price strategy and **(3 marks)** for non-price. Award as 3 marks for 1 point or 2 + 1 for two points Identification of one **price** strategy **(1)** and application and/or analysis **(2)**. Strategies may include: • Predatory pricing • Limit pricing • Sales maximisation • Revenue maximisation • Buy one get one free • Price discrimination • Undercutting rivals Identification of one **non-price** strategy **(1)** and application and/or analysis **(2)**. Strategies may include: • Further increases in efficiency • Investment into new technology to increase productivity. • Improve product quality • Marketing campaign to win business customers. • Advertising • Promotion through other means, bundling products (which may be identical) • Move production abroad • External growth **Award maximum 4/6 if no reference to the pharmaceutical industry.** **Evaluation (3+3 or 2+2+2 or 3+2+1)** A range of ideas could be developed, for example: ➢ It may be harder to make further increases in efficiency; all firms trying to engage in R&D ➢ Depends on PEDs ➢ There may be retaliation, e.g. price war ➢ Short term/long term success ➢ Investment /R&D is expensive and there is no guarantee of success. ➢ Improving product quality is expensive ➢ Marketing is expensive and no guarantee of success ➢ Predatory pricing is illegal so there might be fines ➢ Benefits or costs to other stakeholders.

Level	Mark	Descriptor
Level 1	1-3	Identification of one **non-price or price** strategy **(1)** and analysis **(2)**.
Level 2	4-7	Identification of one **non-price and price** strategy **(2)** and analysis **(4)**. Brief evaluation **(1)**
Level 3	8-12	Identification of one **non-price and price** strategy **(2)** and analysis **(4)**. Extensive evaluation **(Up to 6)**

END OF SECTION B

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Question Number	Indicative content	Mark
39	**Knowledge 4, Application 4, Analysis 8, Evaluation 9** • Definition of collusion • Recognition of the concept of interdependence likely to exist in an oligopolistic market structure • Identification of the format in which collusion may take Likely reasons: • Reduce the level of competition & the cost of direct competition e.g. – marketing or price wars • Increase revenue and joint profit maximisation • Use of game theory and pay off matrix to show the benefits of collusion v competition, e.g Firm B | Revenue	High Price	Low Price
High Price	£7.7 bn , £7.7 bn	£1 bn , £10bn
Low Price	£10bn , £1 bn	£5bn , £5bn | Firm A • To restrict choice and increase price setting power • To enable the cost of regulations & taxation to more easily be passed on to the consumer • To protect market share/dominance against new entrants and rivals • To reduce uncertainty within the market • To control supply • Higher producer surplus and shareholder value • Market rigging to allocate work between contractors • Anti-competitive practices to restrict access to the supply chain • Poor regulation/asymmetric information/regulatory capture so lack of detection/difficult to find evidence of tacit collusion. **NB for a Level 4 response, candidates must refer to a specific INDUSTRY in their answer.**	

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Evaluation

- Likely problems that may occur:
  Illegal nature of collusion – risk of fines & criminal prosecution
  Impact on brand image
  Risk of cheating/breakdown of the agreement
  Risk of complacency and a lack of innovation – leading to x inefficiency/lack of competitiveness/threat from new entrant

- Effectiveness of the collusion will depend on:
  Number of firms involved
  Relative size of firms
  Degree of trust
  Levels of barriers to entry
  PED of product demand
  Chances of whistleblower behaviour

  Level and effectiveness of regulation

- Debate over whether it is collusion or simply the nature of oligopoly markets e.g. airline industry share safety features and check-in desks

- Relative significance of arguments made

- Use of contrasting examples to highlight significance

- Collusive behaviour often breaks down, using pay-off matrix.
- Non-collusive reasons for price stability e.g. price leadership

- Arguments that it could bring benefits e.g. – the survival of a declining industry/benefits to consumers and others - This point can count as KAA

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(25)

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Knowledge, application and analysis		
Level	Mark	Descriptor
	0	A completely inaccurate response.
Level 1	1–4	Displays isolated or imprecise knowledge and understanding of terms, concepts, theories and models. Use of generic or irrelevant information or examples. Descriptive approach which has no chains of reasoning or links between causes and consequences.
Level 2	5–8	Displays elements of knowledge and understanding of economic principles, concepts and theories. Applies economic ideas and relates them to economic problems in context, although does not focus on the broad elements of the question. A narrow response or superficial, two stage chains of reasoning only.
Level 3	9–12	Demonstrates accurate knowledge and understanding of the concepts, principles and models. Ability to apply economic concepts and relate them directly to the broad elements of the question with evidence integrated into the answer. Analysis is clear and coherent, although it may lack balance. Chains of reasoning are developed but the answer may lack balance.
Level 4	13–16	Demonstrates precise knowledge and understanding of the concepts, principles and models. Ability to link knowledge and understanding in context using appropriate examples. Analysis is relevant and focused with evidence fully and reliably integrated. Economic ideas are carefully selected and applied appropriately to economic issues and problems. The answer demonstrates logical and coherent chains of reasoning.
Evaluation		
Level	Mark	Descriptor
	0	No evaluative comments.
Level 1	1–3	Identification of generic evaluative comments without supporting evidence/reference to context. No evidence of a logical chain of reasoning.
Level 2	4–6	Evidence of evaluation of alternative approaches which is unbalanced leading to unsubstantiated judgements. Evaluative comments with supporting evidence/reference to context and a partially developed chain of reasoning.
Level 3	7–9	Evaluative comments supported by relevant reasoning and appropriate reference to context. Evaluation recognises different viewpoints and is critical of the evidence provided and/or the assumptions underlying the analysis enabling informed judgements to be made.

END OF SECTION C

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