1.16 Monopolistic Competition and Oligopoly: Non-Price Competition and Game Theory: Test Pack

Total Marks

AQA 7136 · Calculators not allowed · about 25 minutes

Name: _____ Date: ____ / ____ / _____

Answer all questions. Show working for calculations. A calculator is not required.

1 Multiple choice on oligopoly characteristics in a UK retail sector context: which one is a characteristic of an oligopoly?

- ☐ Many firms selling identical products with no barriers to entry
- ☐ A single firm producing the industry's entire output
- ☐ A small number of firms with mutual interdependence
- ☐ Government ownership of all major firms

(Total for Question 1 is 1 mark)

---

2 Explain two differences between overt collusion (such as a cartel) and tacit collusion in oligopolistic markets, using the international oil market (OPEC) as a context for overt collusion.

(Total for Question 2 is 4 marks)

---

3 Define 'product differentiation' as used when describing monopolistic competition in local cafe markets.

(Total for Question 3 is 1 mark)

© Revision Library | revisionlibrary.co.uk

4 Explain two methods of non-price competition used by retailers in an oligopoly, giving a specific UK example for each method.

(Total for Question 4 is 4 marks)

---

5 Game theory payoff matrix for two rival airlines on a domestic UK route, offering a simplified choice: keep price high or cut price. The payoff matrix below gives profits in millions. Airline A choices label rows, Airline B choices label columns.

Matrix:

- If both keep price high: A gets 30, B gets 30.
- If A keeps high and B cuts price: A gets 15, B gets 40.
- If A cuts and B keeps high: A gets 40, B gets 15.
- If both cut price: A gets 20, B gets 20.

Using this matrix, identify whether each airline has a dominant strategy, state the Nash equilibrium, and explain whether the outcome is Pareto efficient. Full sentences are required.

(Total for Question 5 is 6 marks)

© Revision Library | revisionlibrary.co.uk

Mark scheme · 1.16 Monopolistic Competition and Oligopoly: Non-Price Competition and Game Theory: Test Pack

Question 1

correct choice: a small number of firms with mutual interdependence	**B1**

Answer: A small number of firms with mutual interdependence

Question 2

identifies overt collusion as formal agreements on price or output, with OPEC as an example of an organisation that coordinates quotas	**B1**
explains that overt collusion is illegal in many jurisdictions and requires explicit coordination, monitoring and enforcement among members	**B1**
identifies tacit collusion as informal, unspoken coordination where firms recognise mutual interdependence and avoid price competition without explicit agreement	**B1**
explains tacit collusion is harder to detect and enforce against, may rely on repeated interaction and signaling, and can be more stable in the presence of high concentration and barriers to entry	**B1**

Answer: Overt collusion involves explicit agreements like OPEC quotas and is often illegal and enforceable; tacit collusion is informal, relies on signalling and repeated interaction and is harder to detect.

Question 3

a characteristic where firms sell products that are similar but not identical, distinguished by quality, features, branding or location	**B1**

Answer: Products that are similar but not identical, distinguished by features, quality, branding or location.

Question 4

identifies first method, e.g. heavy advertising and branding	**B1**
develops with UK example, e.g. a supermarket chain investing in TV and digital advertising to differentiate its private-label products	**B1**
identifies second method, e.g. loyalty schemes or product innovation	**B1**
develops with UK example, e.g. a petrol retailer using a loyalty points scheme to retain customers	**B1**

Answer: Advertising/branding with example; loyalty schemes or product innovation with example.

Question 5

shows that for Airline A, comparing payoffs: keeping high yields 30 if B keeps high and 15 if B cuts; cutting yields 40 if B keeps high and 20 if B cuts	**M1**
concludes Airline A's dominant strategy is to cut price (40>30 and 20>15)	**A1**
shows that for Airline B, keeping high yields 30 if A keeps high and 15 if A cuts; cutting yields 40 if A keeps high and 20 if A cuts	**M1**
concludes Airline B's dominant strategy is to cut price (40>30 and 20>15)	**A1**
states Nash equilibrium is both cut price, giving payoffs (20,20), since neither firm can improve profit by unilaterally changing strategy	**B1**
explains outcome is not Pareto efficient because both keeping price high yields (30,30) which is strictly better for both firms	**B1**

Answer: Both firms have a dominant strategy to cut price; Nash equilibrium is both cut price (20,20); this is not Pareto efficient because (30,30) from both keeping price high dominates it.

© Revision Library | revisionlibrary.co.uk