FACULTY OF COMMERCE  

SCHOOL OF ECONOMICS  

HTTP://WWW.UOW.EDU.AU/COMMERCE/ECON  

http://ECON312 INDUSTRIAL ECONOMICS 6 CP  

AUTUMN SESSION 2007 WOLLONGONG CAMPUS  

Lecturer / Subject Coordinator  

DR JULIE SUTHERLAND School of Economics  

Room: Bdg 40 Ph: 42214017 email: julie_sutherland@uow.edu.au  
Rm 208  

Consultation: Wednesday Time: 12:30 – 14:30  
Friday 12:30 – 14:30
SECTION A: GENERAL INFORMATION

LECTURE TIMES
Lectures will be held on Wednesday at 9:30 to 11:30 Room 2100, Building 19

LECTURE PROGRAM

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics</th>
<th>Readings</th>
</tr>
</thead>
<tbody>
<tr>
<td>WK 1 028/02/07</td>
<td>Emergency Evacuation Procedures</td>
<td>• Chapter 1</td>
</tr>
<tr>
<td></td>
<td>1. Introduction</td>
<td></td>
</tr>
<tr>
<td>WK 2 07/03/07</td>
<td>2. Microeconomic Foundations</td>
<td>• Chapter 2</td>
</tr>
<tr>
<td>WK 3 14/03/07</td>
<td>3. Non-collusive Oligopoly</td>
<td>• Chapter 4</td>
</tr>
<tr>
<td>WK 4 21/03/07</td>
<td>4. Collusive Oligopoly</td>
<td>• Chapter 5</td>
</tr>
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<td>WK 5 28/03/07</td>
<td>5. Concentration Measures</td>
<td>• Chapter 6</td>
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<td>• Chapter 7</td>
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<tr>
<td>WK 6 04/04/07</td>
<td>6. Pricing</td>
<td>• Chapter 10</td>
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<tr>
<td>11/04/07</td>
<td>Mid-semester recess</td>
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<tr>
<td>WK 7 18/04/07</td>
<td>Mid-semester Examination</td>
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<tr>
<td>WK 8 25/04/07</td>
<td>Public Holiday</td>
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<tr>
<td>WK 9 02/05/07</td>
<td>7. Product Differentiation</td>
<td>• Chapter 12</td>
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<tr>
<td>WK 10 04/05/07</td>
<td>8. Advertising and Research &amp; Development</td>
<td>• Chapter 13</td>
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<tr>
<td></td>
<td></td>
<td>• Chapter 14</td>
</tr>
<tr>
<td>WK 11 11/05/07</td>
<td>9. Vertical Integration</td>
<td>• Chapter 15</td>
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</tbody>
</table>
WK 12  
18/05/07  10. Competition Policy  
• Chapter 17

WK 13  
25/05/07  11. Regulation  
• Chapter 18

TUTORIAL TIMES
Tutorials will be held on Wednesday at 11:30 - 12:30 Room 2100, Building 19

TUTORIAL PROGRAM

<table>
<thead>
<tr>
<th>Date</th>
<th>Topics Covered</th>
<th>Readings</th>
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<tbody>
<tr>
<td>Week 1</td>
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</table>
| Week 2  | Emergency Evacuation Procedures  
1. Introduction  
2. Microeconomic Foundations | • Chapter 1  
• Chapter 2 |
| Week 3  | 3. Non-collusive Oligopoly   | • Chapter 4               |
| Week 4  | 4. Collusive Oligopoly       | • Chapter 5               |
| Week 5  | 5. Concentration Measures    | • Chapter 6  
• Chapter 7 |
| Week 6  | 6. Pricing                   | • Chapter 10             |
| Week 7  | Mid-semester Examination     |                           |
| Week 8  | Public Holiday               |                           |
| Week 9  | 7. Product Differentiation   | • Chapter 12             |
| Week 10 | 8. Advertising and Research & Development | • Chapters 13 and 14 |
| Week 11 | 9. Vertical Integration      | • Chapter 15             |
| Week 12 | 10. Competition Policy and Regulation | • Chapter 17 |
| Week 13 | 11. Regulation               | • Chapter 18             |
BRIEF OUTLINE

This subject is an introduction to the field of industrial economics and aims to demonstrate how economic analysis can be used to explain, evaluate and suggest policy responses to the structure of firms, markets, and their interactions. The subject focuses on the factors affecting production and productivity with regard to industrial organisation in Australia. Firm decision regarding prices, employment, innovation, output, and income distribution will be analysed.

STUDENT LEARNING OUTCOMES

On successful completion of this subject, the student should be able to:

- Explain and analyse the main issues and debates in the field of industrial economics
- Describe the workings of different market structures
- Critically evaluate different policy approaches to industry
- Explain the economic behaviour of different industries, firms and markets in relation to their output and pricing decisions
- Analyse and provide policy recommendation about monopolies, cartels, non-cooperative oligopolies and other forms of imperfect competition.
- Critically evaluate the relationship between industrial structure and performance and the various policy approaches to innovation, entrepreneurship and industry policy.

ATTENDANCE REQUIREMENTS

In order to maximise learning outcomes, it is strongly recommended that students attend all lectures.

PARTICIPATION/CONTRIBUTION TO TUTORIALS

Attendance and participation in tutorials is expected.

Each student must attend the allocated tutorial in order to complete Assessment 1 (Tutorial Presentation and Submission).

PERFORMANCE LEVEL

To be eligible to pass this subject, students must achieve an overall mark of at least 45%, and at least 40% on the final examination.

To be eligible to pass this subject all assessment components must be completed.

REQUIRED TEXT(S)


This textbook is available online from the University Bookshop at http://unishop.uow.edu.au/textbooks/
RECOMMENDED BACKGROUND AND FURTHER READING


This is not an exhaustive list of references. Students should also use the library catalogue and databases to locate additional resources.
### SECTION B: ASSESSMENT

#### WRITTEN ASSESSMENT

<table>
<thead>
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<th>Assessment 1:</th>
<th>Assignment 1</th>
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<tbody>
<tr>
<td>Topic</td>
<td>Topics 1 – 6 inclusive</td>
</tr>
<tr>
<td>Length:</td>
<td>2,000 words maximum</td>
</tr>
<tr>
<td>Weighting:</td>
<td>15 per cent</td>
</tr>
<tr>
<td>Due date</td>
<td>18 April, 2007; 9:30</td>
</tr>
<tr>
<td>Style and format:</td>
<td>The Assignment must be submitted into the ECON312 submission box located on Level 2 of Building 40. (The solution should be type-written and double spaced.)</td>
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</tbody>
</table>

#### ASSIGNMENT 1

1. With reference to Case Study 1.1 in the text, assess the extent to which competition has increased in Australian banking in recent years. What effect has this had on the performance of banks?

2. With reference to Case Study 2.1 in the text, explain why large hospitals may be able to operate with lower average costs than small hospitals in the long run.

3. With reference to Case Studies 5.1 and 5.2 in the text, suggest factors that may tend to help or hinder collusion.

4. With reference to Case Study 6.2 in the text, what factors may give rise to the appearance of clusters of related and supporting industries in particular geographic areas?
Assignment 2

1. With reference to Case Study 10.2 in the text, examine the conditions under which intertemporal price discrimination might be a profitable pricing strategy.

2. With reference to Case Study 10.3 in the text explain how a multinational firm can use transfer pricing to minimise tax exposure.

3. With reference to Case Study 12.2 in the text, quote examples of vertical and horizontal product differentiation.

4. With reference to Case Study 14.3 in the text, are effective arrangements for the protection of intellectual property rights always a necessary prerequisite for innovative activity to take place?
Examinations

**MID-SESSION EXAMINATION**

<table>
<thead>
<tr>
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<tr>
<td>Date</td>
<td>Tuesday 11 April, 2006 (Week 8).</td>
</tr>
<tr>
<td>Time allowed</td>
<td>2 hours</td>
</tr>
<tr>
<td>Structure of paper</td>
<td>A selection of long answer, short answer and numeric questions.</td>
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**FINAL EXAMINATION**

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<tr>
<td>Date</td>
<td>Examination period 5 June – 17 June. The final examination date will be confirmed during the course of the subject and published on SOLS approximately 3 weeks before the examination period.</td>
</tr>
<tr>
<td>Time allowed</td>
<td>2 hours and 15 minutes</td>
</tr>
<tr>
<td>Structure of paper</td>
<td>A selection of long answer, short answer and numeric questions.</td>
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</table>

**SUBMISSION, RETENTION AND COLLECTION OF WRITTEN ASSESSMENT**

Students must submit their assignments, in hard copy, to the submission box titled “Dr Julie Sutherland: ECON312, Industrial Economics”, located at the head of the corridor leading to the School of Economics on Level 1 of Building 40.

A Faculty of Commerce assignment cover sheet must be attached to each piece of written assessment.

This cover sheet can be obtained from the website: http://www.uow.edu.au/commerce/pdf/assignmentcoversheet.pdf

A receipt acknowledging submission of each assignment will be returned to students during their scheduled tutorial class on the day (Thursday) following assignment submission.

Graded assignments will be returned to students during the scheduled lecture approximately 2 weeks after submission. Assignments not collected at this time can be collected during the lecturer’s scheduled office hours.

**PENALTIES FOR LATE SUBMISSION OF ASSESSMENT**

Assessed work must be handed in by the date and time given. Assessed work handed in late can be penalised by the deduction (from the mark given to the assessed work) of 5 percentage points per 24 hours of the weekday or part thereof. The operation of this rule will not result in a negative mark being carried forward.
**PLAGIARISM**

Plagiarism means using the ideas of someone else without giving them proper credit. For example, that someone else may be an author, critic, journalist, artist, composer, lecturer, tutor or another student. Unintentional plagiarism can result if you don’t understand and use the acceptable scholarly methods of acknowledgement. Whether plagiarism is deliberate or unintentional, the University may impose penalties, which can be very severe. When it is desirable, or necessary, to use other people’s material, take care to include appropriate references and attribution. *Plagiarism will not be tolerated and has led to expulsion from the University.*

Students should visit the following University website and become familiar with the University’s policy on Plagiarism.


**SECTION C: RULES, CODES OF PRACTICE & POLICIES**

**C1 UNIVERSITY POLICIES**

Information on the following University Policies can be found at the websites below:

<table>
<thead>
<tr>
<th>Policy</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethical objection by students to the use of animal and animal products in coursework subjects</td>
<td><a href="http://www.uow.edu.au/about/policy/ethicalobjectionanimals.html">http://www.uow.edu.au/about/policy/ethicalobjectionanimals.html</a></td>
</tr>
</tbody>
</table>
Policy*


* see brief explanation of policy below.

C1.1 Non-discriminatory Language

The Faculty of Commerce supports the University’s policy on the use of non-discriminatory language. It is the responsibility of students to ensure that they understand and abide by this policy. The policy is available at:

http://staff.uow.edu.au/eeo/nondiscrimlanguage.html

C1.2 Special Consideration Policy

The Faculty of Commerce recognises that it has a responsibility to ensure equity and consistency across its subjects for all students. Sometimes, in exceptional circumstances, students need to apply for special consideration in order to complete all assessable work.

The University applies strict criteria to the granting of special consideration. Before applying for special consideration students should carefully read the University’s policy. The policy can be found at:


C1.3 Student Academic Grievance Policy

The Faculty of Commerce aims to provide a fair, equitable and productive learning environment for all its students. The Student Academic Grievance Policy seeks to support the achievement of this goal by providing a transparent and consistent process for resolving student academic grievances.

Any student who has a grievance over a result should, in the first instance, attempt to informally resolve this grievance with his/her lecturer. If the grievance cannot be resolved, the student can complete an academic grievance form and lodge the grievance with the Faculty.

Once the Faculty has made a decision on the grievance, if the student still feels the situation has not been fully resolved s/he may consult the Dean of Students. However, the Dean of Students can have no input into the academic judgement of the lecturer and can only review the grievance to ensure proper procedure has been followed.

For more information, please consult the policy in full at


C2 Faculty and School Policies

Referencing

Why do you need to reference?

At University it is necessary to acknowledge the sources of information and ideas that you have incorporated in your assignments. Failure to do this thoroughly may result in accusations of plagiarism: this is the academic equivalent of stealing (because by not acknowledging someone else’s work, you are presenting it as your own). Plagiarism is taken very seriously by the University and may result in expulsion from the University.

Referencing is not only about acknowledging other people’s work: accurate referencing and lists of references are beneficial when researching a topic as they allow the reader to follow up...
information and read further into the area. In a sense, references provide readers with clues to help them explore different avenues of a topic. This aspect of referencing will become more valuable to you as you progress in your studies.

There is a correct procedure that must be followed when referencing and using footnotes. Not complying with these set techniques and format will most likely result in loss of marks.

When writing an essay it is easiest to reference as you go, making sure you are writing down all relevant information. This will save hours trying to find the source again in the library.

THE HARVARD SYSTEM OF REFERENCING

The Faculty of Commerce uses the Harvard system of referencing. This system makes use of short references within the body of the text. It is supplemented by a detailed list of references at the end of the text, which provides all the information necessary to find the source material. In-text references include the author and year of publication, and where necessary the page number(s).

*It is the responsibility of students to ensure that they are familiar with the Harvard system of referencing and that they use it accurately in all written work submitted.*

Students should consult the following University Library website for a detailed explanation and examples of the Harvard system of referencing.


CITATION OF ELECTRONIC SOURCES

It is necessary for students to reference all sources used in their written work, including file transfer protocol sites, worldwide web sites, telnet sites, synchronous communications (MOOs, MUDs, IRC, etc.) Gopher sites, and email, Listserv and Newsgroup citations.

*It is the responsibility of students to ensure that they are familiar with the accepted Faculty of Commerce practice for referencing electronic material and that they use it accurately in all written work submitted.*

Students should consult the following University Library website for a detailed explanation and examples of how to reference electronic material..


OCCUPATIONAL HEALTH AND SAFETY WHERE RELEVANT, INCLUDING SAFETY IN LABORATORIES AND ON FIELD TRIPS

C3 SUPPORT SERVICES AND FACILITIES

LEARNING RESOURCE CENTRE

Learning Development offers a range of free services to all enrolled students who wish to improve their academic or English language skills. There are a range of workshops available including: essay writing and editing; reading for assignments; grammar; presentation skills; pronunciation and exam preparation.

For information on language and academic skills workshops, or to make appointments for consultations, please visit the Learning Resource Centre (LRC), Building 19, Ground Floor, Room G102, or Phone 02 4221 3977. For further information visit the website:

FACULTY LIBRARIANS
Each faculty has a Faculty Librarian who is available to help with research related enquiries. Research Help Desk staff are also available in the Library to assist with research needs.

The Faculty Librarians for Commerce can be contacted as follows:

    email: lib_commerce@uow.edu.au
    telephone: 42 213078

DISABILITY LIAISON OFFICER
The Disability Liaison Officer (DLO) can provide advice on how particular disabilities affect university study and information on resources available at the University for assisting students with disabilities. Students commencing courses are advised to contact the Disability Liaison Officer prior to the beginning of their first session of study.

For further information on services offered, consult the Disability Services website or contact the office.

    web address: http://www.uow.edu.au/student/services/ds/
    telephone: 42 213445
    fax: 42 215667

FACULTY DISABILITY ADVISERS
Faculty Disability Advisers are academic staff who provide assistance and support to students with disabilities within their Faculty and act as an intermediary between the student and the Faculty's academic and general staff. They provide support, educational advice and referral to appropriate staff on issues related to teaching and learning within the Faculty and the University. Students are advised to communicate specific information about the ways in which their disability affects learning to the Faculty Disability Adviser as soon as possible after enrolment.

The Faculty of Commerce Disability Adviser is Mr. Ron Perrin. Mr Perrin can be contacted as follows:

    Office location: Building 40, room 311
    email address: ron_perrin@uow.edu.au
    telephone: 42 214118

WOOLYUNGAH INDIGENOUS CENTRE
The Woolyungah Indigenous Centre provides academic and personal support for Aboriginal & Torres Strait Islander and other indigenous students. The Centre also runs an Indigenous Specific
Orientation Program for students who gain entry to the University through the alternative admissions program.

For further information on services offered, consult the Woolyungah Indigenous Centre website or contact the office.

<table>
<thead>
<tr>
<th>Centre location:</th>
<th>Building 30</th>
</tr>
</thead>
<tbody>
<tr>
<td>web address:</td>
<td><a href="http://www.uow.edu.au/aec/">http://www.uow.edu.au/aec/</a></td>
</tr>
<tr>
<td>telephone:</td>
<td>42 213563</td>
</tr>
<tr>
<td>fax:</td>
<td>42 214244</td>
</tr>
</tbody>
</table>
TUTORIAL QUESTIONS

TOPIC 1

Introduction

1. Why is the structure-conduct-performance paradigm so widely used to study the conduct and performance of firms and industries?
2. List the factors that describe market structure. Give examples of ways in which market structure affects conduct.
3. What are the limitations of the structure-conduct-performance paradigm?
4. Outline Porter's five forces model of the firm's competitive environment.
5. With reference to Case Study 1.1 in the text assess the extent to which competition has increased in European banking in recent years. What effect has this had on the performance of banks?

TOPIC 2

Microeconomic Foundations

1. Consider a perfectly competitive firm with a total cost function given by \( TC = q^2 + 100 \), where \( q \) is the level of output. The marginal cost function is given by \( MC = 2q \).
   a. If the price of output \( P \) is $60, how much output should the firm produce?
   b. Find the firm’s profits at this level of output.
   c. Find the equation of the firm’s short-run supply curve.
   d. If there are 100 identical firms in the market, find the equation of the industry supply curve.
   e. Explain why a profit-maximising firm would never operate on the portion of its demand function where the price elasticity of demand is below one.

2. A single firm with constant marginal costs of $8 monopolizes a market with demand \( Q = 100 - 2p \).
   a. Determine the profit-maximising price and quantity for the monopolist.
   b. How large is the deadweight loss from monopoly? (Hint: Determine the competitive price and output.)
   c. How large is the additional social loss if, in order to obtain the monopoly, the firm spent an amount equal to half of its current profits?

3. Explain why a firm’s short-run average cost function may be U-shaped. Explain why a firm’s long-run average cost function may be U-shaped.

4. With reference to case study 2.1, explain why large NHS hospitals may be able to operate with lower average costs than small NHS hospitals in the long run.

5. With reference to case study 2.2, assess the relative importance of ticket prices and factors other than price in determining the level of spectator demand for attendance at professional team sports matches.
6. With reference to the theory of production, explain the distinction between allocative efficiency and productive efficiency.

7. Compare the productive and allocative efficiency properties of the long-run profit-maximising equilibria under perfect competition, monopoly and monopolistic competition.

8. Are all monopolies necessarily bad for social welfare?

9. Is allocative efficiency ever attainable by a natural monopoly?

**TOPIC 3**

*Non-collusive Oligopoly*

1. The Cournot model.
   a. Briefly outline the Cournot duopoly model.
   b. Why in the single period, is a Cournot equilibrium also a Nash equilibrium?
   c. Explain the role played by the assumption of zero conjectural variation in the derivation of the Cournot-Nash equilibrium.
   d. Suggest industry/firm examples from the “real world” that approximate the Cournot theory of oligopoly.

2. The Stackelberg model.
   a. Briefly outline the Stackelberg model.
   b. Suppose Boeing is a Stackelberg leader and Airbus is the follower in a duopoly, and industry demand and cost conditions are:

   \[
   P = 60 - 2(q_B + q_A) \\
   MC_B = 10 \\
   MC_A = 20
   \]

   What are the Stackelberg equilibrium quantities? What is the Stackelberg equilibrium price?
   c. Suggest industry/firm examples from the “real world” that approximate the Stackelberg theory of oligopoly.

3. Game theory
   a. Why would the equilibrium price in any period of an infinitely repeated prisoner’s dilemma game be expected to be higher than the equilibrium price in a single period game?
   b. Explain what is meant by the term “mixed strategy”. Under what circumstances is it advisable for the players in a non-cooperative game to adopt mixed strategies?
   c. In repeated games it is often assumed that rivals are more likely to cooperate with one another than to compete. Under what conditions is competition likely to break out in repeated games?
   d. With reference to Case Study 4.3 in the text outline the contribution of the model of the prisoner’s dilemma to our understanding of strategic behaviour.
4. Identify the major characteristics of industries prone to collusion. Give examples of industries which might therefore be candidates for collusive behaviour.

**TOPIC 4**

*Collusive Oligopoly*

1. How can an elastic demand curve deter the formation of a cartel?
2. Are there ever any motives for collusion other than the desire to maintain prices at a level higher than would be achieved in a competitive market?
3. Given the difficulty in detecting overt acts of collusion, suggest evidence that might provide investigators with proof of collusive behaviour.
4. Consider an industry consisting of a cartel of three firms and a single price-taking outside firm. Would the following changes make it easier or more difficult to maintain the cartel agreement, and why?
   a. an increase in the elasticity of market demand
   b. entry by a second non-member firm, reducing the cartel’s share of industry output
   c. an increase in the elasticity of the non-member firm’s supply curve
5. Are cartels likely in the following markets? Why or why not?
   a. Wine
   b. Bauxite
   c. Computers
6. Quoting examples drawn from Case Studies 5.1 and 5.2 in the text, suggest factors that may tend to help or hinder collusion.

**TOPIC 5**

*Concentration Measures*

1. Examine the main advantages and disadvantages of the n-firm concentration ratio as a measure of seller concentration.
2. Does the Herfindahl-Hirschman index provide a more satisfactory method for measuring seller concentration than the n-firm concentration ratio?
3. 

<table>
<thead>
<tr>
<th>Measure</th>
<th>Industry 1</th>
<th>Industry 2</th>
<th>Industry 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR₃</td>
<td>.7226</td>
<td>.333</td>
<td>.8767</td>
</tr>
<tr>
<td>HH</td>
<td>.2108</td>
<td>.1111</td>
<td>.3346</td>
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</table>

The above table details a 3-firm Concentration Ratio measure (CR₃) and a Herfindahl-Hirschman index (HH) for three industries labeled Industry 1, Industry 2, and Industry 3. Compare and contrast seller concentration across the three industries using the concentration measures provided.
4. What factors may give rise to the appearance of clusters of related and supporting industries in particular geographic areas? Illustrate your answer with examples drawn from Case Study 6.2 in the text.

5. What are the implications of the relationship between minimum efficient scale (MES) of production and the level of market demand for the degree of seller concentration in an industry?

6. Outline the model of the industry life cycle. For what reasons might the degree of seller concentration be expected to change as an industry progresses through the four stages of its life cycle?

7. With reference to Case Study 7.1 in the text, consider the extent to which the historical development of the US credit union sector conforms to the industry life cycle model.

**TOPIC 6**

**Pricing**

1. What conditions must be satisfied for a producer to be able to implement a policy of price discrimination?

2. In the case of a monopolist, why might a policy of first-degree price discrimination produce an outcome that is preferred on social welfare criteria to a policy of setting a uniform price in order to maximise profit?

3. With reference to Case Study 10.2 in the text, examine the conditions under which intertemporal price discrimination might be a profitable pricing strategy.

4. Consider two medium-sized English Premier League football clubs, one of which has a small stadium that is regularly filled to capacity, while the other has a larger stadium in which often there are many empty seats. In what ways might you expect the ticket price structures of these two clubs to differ? Your answer should refer to Case Study 10.1 in the case.

5. The demand for gas and electricity varies between different times of the day, and between different months of the year. What factors should be considered by a utility company when deciding how much capacity to install, and what prices to charge during peak and off-peak periods.

6. Explain how a multidivisional firm should set its transfer price when there is an imperfectly competitive external market for the intermediate product.

7. With reference to Case Study 10.3 in the text explain how a multinational firm can use transfer pricing to minimise tax exposure.

**TOPIC 7**

**Product differentiation**

1. What is the distinction between vertical and horizontal product differentiation?


3. Can a free market be expected to deliver a socially optimal level of product differentiation?
4. Give examples of goods or services that have been successfully differentiated by:
   a. advertising.
   b. geographical location.
   c. factor inputs.
   d. packaging.
   e. national differences.
   f. trademarks.
5. In the Hotelling model with fixed locations and endogenous prices, an increase in the degree of product differentiation might result in a decrease in the equilibrium collusive price, but an increase in the equilibrium non-collusive price. Explain why.
6. With reference to Case Study 12.3, explain why commercial flights operated by rival airlines are sometimes clustered around similar or identical departure times.

**TOPIC 8**

*Advertising and Research & Development*

1. On theoretical grounds, explain why we might expect to observe a higher level of advertising in an oligopoly than in either of the polar cases of perfect competition or monopoly.
2. According to the Dorfman-Steiner condition, a monopolist’s optimum ratio of advertising expenditure to sales revenue is given by the ratio of the advertising elasticity of demand to price elasticity of (market) demand. Explain the intuition underlying this theoretical result. Would you give an oligopolist the same advice?
3. Explain the distinction between product innovation and process innovation. Quote examples of new technologies that require elements of both forms of innovation.
4. Is the level of effort devoted to research and development likely to be higher if an industry is monopolised than if it is perfectly competitive? Consider this issue with reference to the theoretical analyses of Arrow and Demsetz.
5. What factors might be relevant in explaining why Europe’s performance in innovation may have been relatively weak with relative to that of the United States and Japan?
6. What factors are relevant to a firm in determining the speed at which it intends to execute a planned research and development programme? Why might the market structure in which the firm operates be a relevant factor in this decision?
7. What factors should be considered by policy makers when deciding the duration of patents? Is it possible that patents might slow the pace of technical change?
8. Are effective arrangements for the protection of intellectual property rights always a necessary prerequisite for innovative activity to take place? Consider this question with reference to Case Study 14.3 in the text.

**TOPIC 9**

*Vertical integration*

1. Give examples of firms forced to vertically integrate backwards to guarantee their sources of supply and those that have had to integrate forwards to safeguard their distribution outlets.
2. Outline the cost-saving motives for vertical integration.
3. With reference to Case Studies 15.1 and 15.2, assess the arguments for and against vertical integration in the media industry.

4. What are vertical restraints? Examine the market power and cost-saving motives for vertical restraints. Are vertical restraints necessarily damaging to consumer interests?

5. Explain the distinction between the practices of tying and bundling. For what reasons might a supplier consider adopting such practices?

6. With reference to Case Study 15.4, examine the basis on which the Office of Fair Trading acquitted the satellite broadcaster BSkyB of allegations concerning the abuse of market power in the United Kingdom’s market for pay-TV services.

**TOPIC 10**

*Competition policy*

1. What factors should be taken into account by the competition authorities in determining whether a particular market is under monopoly control?

2. With reference to case study 17.1, outline the key components of the US Department of Justice Case against Microsoft.

3. What is meant by workable competition, and what are its implications for the conduct of competition policy?

4. With reference to case study 17.2, identify structural characteristics of the airlines industry that may give rise to impediments to competition.

5. With reference to Section 15.7 and case study 17.6, identify the forms of vertical restraint that constituted the main substance of the European Commission’s case against Irish Sugar.

**TOPIC 11**

*Regulation*

1. If a natural monopolist is suspected of abusing its market power, what remedies short of full-scale nationalisation might be available?

2. Assess the arguments for and against the public ownership of key industries.

3. On what economic grounds can the policy of privatisation be justified?

4. It is often argued that regulation is justified in cases where some form of market failure would otherwise create an inefficient allocation of resources.

5. Identify possible sources of market failure that might give rise to a need for regulation.

6. Explain the difference between rates of return (cost plus) regulation and price cap regulation, and assess the advantages and disadvantages of each.