TOPIC 1: IMPERFECT MARKET - MONOPOLY

Learner Note: You need to revise the following concepts, marginal revenue (MR), marginal cost (MC) and profit maximisation. Make sure you understand the profit maximisation rule – where marginal revenue is equal to marginal cost, applies to all firms regardless of the market structure. Monopoly is a market structure where only one seller (firm) controls the market.

SECTION A: TYPICAL EXAM QUESTIONS

QUESTION 1: 4 minutes (Taken from DoE Exemplar 2008)
List any THREE characteristics of a monopoly. (3 x 2) [6]

QUESTION 2: 12 minutes (Taken from DoE Feb-March 2009)
Study the graph below and answer the questions that follow.

![Graph of an Imperfect Market]

2.1 Define the term *imperfect market*. (3)
2.2 Is the above graph indicating a short- or long-run equilibrium? (3)
2.3 What determines the optimum production level in a monopoly market? (3)
2.4 Indicate the profit area on the graph, by using the labelling system used in the graph. (3)
2.5 Explain why the AR and MR curves are two different curves. (6)
2.6 If you assume that the MC curve represents the supply curve for a perfect market, what will the effect on the price of goods be? (2) [20]
QUESTION 3: 30 minutes  (Taken from DoE Nov 2009)

Examine the monopoly as a market structure and briefly compare it to the perfect market.  [50]

QUESTION 4: 5 minutes  (Taken from DoE Nov 2010)

Draw a fully labelled graph to illustrate economic profit for a monopolist in the short run.  [8]

TOPIC 2: IMPERFECT MARKET – OLIGOPOLY

*Learner Note*: Oligopoly is a market structure where a few firms control the market. Also make sure that you understand how collusion takes place between firms in an oligopoly.

SECTION A: TYPICAL EXAM QUESTIONS

QUESTION 1: 10 minutes  (Taken from DoE Exemplar 2008)

Discuss the characteristics of a typical oligopoly.  (4 x 4) [16]

QUESTION 2: 4 minutes  (Taken from DoE Nov 2008)

With reference to oligopolies, list any THREE forms of non-price competition.  (3 x 2) [6]

QUESTION 3: 5 minutes  (Taken from DoE Nov 2008)

Discuss collusion by oligopolies.  [8]
R53 MILLION FINE FOR PRICE FIXING

**COLLUSION: Health group fixed prices of medical supplies**

Tiger Brands CEO says their firm is 'upset and embarrassed' by the involvement of Adcock Ingram Critical Care (AICC) in collusion, for which it will pay a R53 million penalty. This follows yesterday’s announcement that AICC admitted to being involved in collusive tendering with its competitors for a state tender for intravenous medical products.

The Competition Commission said the penalty it imposed on AICC equates to eight percent of the division's annual turnover, and that the penalty is the highest imposed by it to date – in percentage terms – for collusive behaviour. The commission has referred the matter to its sister body, the Competition Tribunal, to confirm the order.

[Adapted from: Business Times, 2007]

4.1 State TWO aims of the competition policy in South Africa. (4)

4.2 Explain the role played by the Competition Tribunal regarding AICC’s anti-competitive behaviour. (3)

4.3 Which body/institution can AICC approach if it had not been happy with the penalty imposed by the Competition Tribunal? (3) [10]

**QUESTION 5:** 5 minutes (Taken from DoE Nov 2010)

Discuss how non-price competition influences the behaviour of oligopolists. [8]

**SECTION B: ADDITIONAL CONTENT NOTES**

**TOPIC 1: IMPERFECT MARKET – MONOPOLY**

**Introduction**

- Remember prices cause supply and demand to change.
- Prices also dictate the quantities of goods and services that are produced and traded.
- These changes provide the energy that brings about economic growth and employment.
- The main characteristics of perfect competition are that many buyers and sellers operate in the market, and that the market mechanism determines the price negotiated as well as the quantity traded.
- Although imperfect markets differ from perfectly competitive markets in the way prices are established, they trigger similar forces and have similar effects.
- In imperfect markets businesses are price makers or price setters.
- Imperfect markets are classified into 3 main markets:
  - Monopoly
  - Monopolistic competition
  - Oligopoly
MONOPOLIES

- **Monopoly**: It exists when there is only one seller of goods or services for which there is no close substitute - e.g. Eskom.

**Types of monopolies**

- Legal monopoly – It is based on laws preventing other companies from competing (State monopoly).
- Local monopoly – A local monopoly will control the market in a particular area or town, e.g. if there is only one petrol station.
- Natural monopoly – This arises in industries where economies of scale are so large that a single business can supply the entire market, e.g. electricity.
- Horizontal monopoly – This occurs when a parent company takes control over several smaller companies, e.g. Naspers in the printing business.
- Vertical monopoly – This occurs when 1 firm will supply and produce the product, e.g. Eskom.
- Coercive monopoly – This occurs as a result of any activity that violates the principles of a market economy.

**Characteristics of a monopoly**

- No competition – one business controls the supply of goods or service.
- No substitutes – no substitutes on the market for the consumer to choose from.
- Price makers – one business controls the price of the goods or services.
- Barriers to entry – e.g. technology or patents, may keep new companies out.
- Imperfect information – the consumer doesn’t have all the information, e.g. profit margin.
- No homogenous products – they will produce only one product or different varieties.
- Large amount of starting capital is needed.
- Legal considerations – new inventions are protected by patent rights.

**Revenue curves**

- Remember that a monopoly is a price maker.
- Calculations: \( TR = P \times Q \)
  \[
  AR = P \\
  MR = \frac{\Delta TR}{\Delta Q}
  \]

<table>
<thead>
<tr>
<th>P</th>
<th>Q</th>
<th>TR</th>
<th>AR</th>
<th>MR</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>8</td>
<td>0</td>
<td>0</td>
<td>7</td>
</tr>
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<td>5</td>
</tr>
<tr>
<td>3</td>
<td>5</td>
<td>15</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>16</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
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<tr>
<td>7</td>
<td>1</td>
<td>7</td>
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<td>-5</td>
</tr>
<tr>
<td>8</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>-7</td>
</tr>
</tbody>
</table>

- Note for TR maximising output, the MR=0. Also note that the MR curve cuts the horizontal axis exactly halfway between the origin and where the AR curve or demand curve cuts the horizontal axis.
Short-run profits and losses

- In the short-run, the monopoly firm can make economic profits, normal profits or economic losses (refer back to Unit 1). It is possible but unlikely that a monopoly makes an economic loss.

<table>
<thead>
<tr>
<th>Q</th>
<th>P</th>
<th>TR</th>
<th>AR</th>
<th>TC</th>
<th>AC</th>
<th>Profit</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
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<td>0</td>
<td>16</td>
<td>10</td>
<td>-10</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>12</td>
<td>12</td>
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</tr>
<tr>
<td>2</td>
<td>12</td>
<td>24</td>
<td>12</td>
<td>13</td>
<td>6.50</td>
<td>11</td>
</tr>
<tr>
<td>3</td>
<td>10</td>
<td>30</td>
<td>10</td>
<td>17</td>
<td>5.66</td>
<td>13</td>
</tr>
<tr>
<td>4</td>
<td>8</td>
<td>32</td>
<td>8</td>
<td>22</td>
<td>5.50</td>
<td>10</td>
</tr>
<tr>
<td>5</td>
<td>6</td>
<td>30</td>
<td>6</td>
<td>30</td>
<td>6</td>
<td>0</td>
</tr>
<tr>
<td>6</td>
<td>4</td>
<td>24</td>
<td>4</td>
<td>39</td>
<td>6.50</td>
<td>-15</td>
</tr>
<tr>
<td>7</td>
<td>2</td>
<td>14</td>
<td>2</td>
<td>49</td>
<td>7</td>
<td>-35</td>
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<td>0</td>
<td>0</td>
<td>64</td>
<td>8</td>
<td>-64</td>
</tr>
</tbody>
</table>

- The monopoly maximises profits when it produces 3 units, and makes a normal profit when it produces 5 units.
- Note that revenue maximising output (4) is not the same as the profit maximising output (3).

Long-run equilibrium

- In the long-run, a monopoly can make economic or normal profits only.
- Example of things changing is consumers’ tastes and that reduces the demand. This results in a fall in:
  - The price
  - The profit maximising output
  - The monopoly’s profit
- A long-run equilibrium only exists when there are no changes in the demand for the product or in the cost of production.

Comparison with perfect competition

<table>
<thead>
<tr>
<th>Perfect Competition</th>
<th>Monopoly</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Price taker</td>
<td>• Price maker</td>
</tr>
<tr>
<td>• Make economic profits or losses in the short run</td>
<td>• Chooses to supply the quantity</td>
</tr>
<tr>
<td>• No barriers to entry or exit</td>
<td>• Complete barriers to entry</td>
</tr>
<tr>
<td>• Productively efficient in the long run equilibrium</td>
<td>• Make economic profits in the long run</td>
</tr>
<tr>
<td>• Consumers pay lowest possible price</td>
<td>• In the short run they might make economic losses</td>
</tr>
<tr>
<td>• Price is equal to lowest possible AC</td>
<td>• Not productively efficient when it is producing the profit maximising output.</td>
</tr>
<tr>
<td>• Society is making the most efficient use of its resources</td>
<td>• AC are not at a minimum</td>
</tr>
<tr>
<td>• Maximising the output that it produces from the factors of production.</td>
<td>• Firm is not making the most efficient use of society’s scarce resources.</td>
</tr>
</tbody>
</table>
To summarise, in long-run equilibrium the monopoly industry produces less output at a higher price compared to the perfectly competitive market.

**TOPIC 2: IMPERFECT MARKET - OLIGOPOLY**

**OLIGOPOLY**

- **Oligopoly:** A market in which a small number of relatively large businesses supply most of or all the output in the market, e.g. oil industry, telecommunication industry, car industry, etc.

**Characteristics of an oligopoly**

- Limited competition – Only a few suppliers of the same product dominate the market.
- Interactivity – If one company makes a decision, it influence the decisions the other companies make.
- Price changes – They will more frequently change their prices in order to increase their market share.
- Cost advantage – They have an absolute cost advantage over the rest of the competitors.
- Joint decision making – It is a key instrument to make decisions together in order to dominate the market.
- Difficult entry – New firms will experience high barriers to enter.
- High profits – Abnormal high profits may be result of joint decisions.

**Interdependence**

- Another key characteristic of oligopoly firms is that they are interdependent.
- The decisions that an oligopoly firm makes with respect to quantity, marketing strategies and location, for example, depend largely on what it thinks the other firm in the industry will do in response to its actions.

**Collusion**

- Explicit collusion is usually illegal between firms within countries.
- However, firms are still tempted to practice implicit collusion. In other words, they act together to produce the profit maximising output but they do it in such a way that it is very difficult to prove that they have colluded.

**Non-price competition**

- Non-price competition includes the following:
  - Product differentiation: product is slightly different from the others.
  - Product proliferation: different range of products to cater for many different markets.
  - Advertising: oligopoly firms advertise their products heavily.
COMPETITION POLICIES

- Governments in many countries use competition policies to protect consumers and to promote the efficient use of resources.
- Remember the more competitive an industry, the lower the prices.
- Def. merger: occurs when 2 firms join together to form a single firm.
- Def. acquisition: occurs when one firm takes over another firm.
- In 1998 the Competition Act was passed. In terms of the Act, a Competition Commission and Competition Tribunal were established.
- Def. Competition Tribunal: this is a body that decides whether or not to approve recommendations of the Competition Commission.

SECTION C: HOMEWORK

TOPIC 1: IMPERFECT MARKET – MONOPOLY

QUESTION 1: 20 minutes (Source: Economics for all Grade 12)

1.1 Complete the following table:

<table>
<thead>
<tr>
<th>Price (R)</th>
<th>Quantity (Q)</th>
<th>Total revenue (TR)</th>
<th>Marginal revenue (MR)</th>
</tr>
</thead>
<tbody>
<tr>
<td>50</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>45</td>
<td>2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>40</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>35</td>
<td>4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>30</td>
<td>5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1.2 Name four characteristics of a monopoly. (8)

1.3 Explain profit maximisation. (4)

TOPIC 2: IMPERFECT MARKET - OLIGOPOLY

QUESTION 1: 16 minutes (Source: Economics for all Grade 12)

1.1 Name two examples of products that are oligopolies. (4)

1.2 Name the two types of collusions that take place amongst oligopolies. (4)

1.3 Explain a cartel. (6)

1.4 Explain non-price competition. (12)
TOPIC 1: IMPERFECT MARKET – MONOPOLY

QUESTION 1: 4 minutes  (Taken from DoE Exemplar 2008)

- Faced with demand curves ✓ ✓
- Decide on their production levels ✓ ✓
- Exposed to market forces ✓ ✓
- Face substitutes / No close substitutes ✓ ✓
- Enjoy favourable circumstances ✓ ✓
- Exploit consumers ✓ ✓
- Are protected by barriers of entry ✓ ✓
- (Any other relevant facts) (3 X 2)[6]

QUESTION 2: 12 minutes  (Taken from DoE Feb-March 2009)

2.1 A market situation where at least one of the conditions for perfect competition is not satisfied. ✓ ✓ ✓ (3)
2.2 Short-run ✓ ✓ ✓ (3)
2.3 The position of MC and MR where MC = MR ✓ ✓ ✓ (3)
2.4 R, a, b, C ✓ ✓ ✓ (3)
2.5 In a perfectly competitive market the AR = MR = P.
   - A monopoly is confronted with a normal market demand curve which slopes downwards from left to right \( D = AR \).
   - Any point on the monopolist’s demand curve (D) is an indication of the quantity of the product that can be sold, and the price at which it will trade
   - The MR curve runs below the demand curve with the exception of the first unit,
   - TR increases at a diminishing rate up until a point and then starts to decrease.
   - MR is always lower than AR
   - The percentage increase in quantity demanded is greater than the % decrease in price at all points; therefore, the MR will always lower than AR (Any 3 x 2)(6)
2.6 Will decrease to equilibrium point k ✓ ✓ (2) [20]

QUESTION 3: 30 minutes  (Taken from DoE Nov 2009)

INTRODUCTION

The major organisational features of a market, (e.g. number of sellers/buyers the degree of product differentiation/the availability of information) are called the structure of the market. ✓ ✓ ✓

OR

Is a market structure in which there is only ONE seller of a good or service that has no close substitutes, entry into that market is completely blocked. ✓ ✓ ✓ (Max 3)
BODY

MONOPOLY AS MARKET STRUCTURE

Number of firms ✓ ✓
• Whereas a perfectly competitive industry consists of a large number of small firms, the monopoly consists out of one single firm. ✓ ✓
• The monopoly is also the industry. ✓ ✓
• Example: Eskom ✓ ✓ or De Beers – diamond-selling ✓ ✓
  (Accept any other relevant example) ✓ ✓
• In the perfect market there is a large number of firms ✓ ✓

Nature of product ✓ ✓
• The product is unique with no close substitute. ✓ ✓
• Example: Diamonds are unique. ✓ ✓
• In the perfect market products sold are homogeneous. ✓ ✓

Market entry ✓ ✓
• Refers to how easy or difficult it is for businesses to enter or to leave the market ✓ ✓
• Is entirely/completely blocked. ✓ ✓
• A number of barriers to entry that may give rise to monopoly can be:
  - Economies of scale ✓ ✓
  - Limited size of the market ✓ ✓
  - Exclusive ownership of raw materials ✓ ✓
  - Patents ✓ ✓
  - Licensing ✓ ✓
  - Sole rights ✓ ✓
  - Import restrictions ✓ ✓
• In the perfect market, there is complete freedom of entry and exit ✓ ✓

Market Information ✓ ✓
• This refers to market participant’s information on market conditions. ✓ ✓
• All information on market conditions should be available to both buyers and sellers. ✓ ✓
• This means that there are no uncertainties. ✓ ✓
• This assumption also applies in the case of the monopoly. ✓ ✓
• In the perfect market both sellers and buyers have full knowledge of all prevailing market conditions ✓ ✓

Control over price ✓ ✓
• A perfectly competitive business has no control over the price of its product and is, therefore, a price-taker. ✓ ✓
• In the case of a monopoly there are considerable price controls, but limited by market demand and the goal of profit maximisation. ✓ ✓
• In the perfect market no individual buyer or seller is able to influence the market price ✓ ✓

Demand curve for the firm’s product ✓ ✓
• It equals the market demand curve ✓ ✓
• Downward-sloping from left to right ✓ ✓
• In the perfect market, the market demand curve slopes downwards from left to right, but the individual business cannot influence the market price, and its demand curve is the actual market price taken – horizontal to the quantity axis ✓ ✓
Long-run economic profit ✓ ✓
- Can be positive ✓ ✓
- Because new entries are blocked and short-run economic profit; therefore, cannot be reduced by new competing firms entering the industry ✓ ✓
- The monopoly can thus continue to earn economic profit as long as the demand for its product remains intact ✓ ✓
- In the perfect market economic profit does not exist on the long run ✓ ✓

Any 5 x 6 (30) – discussion on monopoly
Any 5 x 2 (10) – for comparison to perfect market
A maximum of 12 marks can be allocated for graphs – 28 marks for discussion

CONCLUSION
From the above it is clear that healthy competition contributes to a well-functioning market structure. ✓ ✓

[50]

QUESTION 4: 5 minutes (Taken from DoE Nov 2010)

Labelling of axes = 2 marks
Labelling of curves = 4 marks
Indicating economic profit = 2 marks
TOTAL = 8 MARKS
TOPIC 2: IMPERFECT MARKET - OLIGOPOLY

QUESTION 1: 10 minutes  
(Taken from DoE Exemplar 2008)

- Type of product ✓✓ homogeneous (pure oligopoly) or differentiated (differentiated oligopoly) ✓✓
- Entry ✓✓ new producers have free entry although not easily illustrated - only few businesses in market ✓✓
- Control over prices ✓✓ producers generally have considerable control over price of products ✓✓
- Mutual dependence ✓✓ only few businesses – influenced by others’ actions – competitors react ✓✓

(Any other relevant facts)  
(4 X 4) [16]

QUESTION 2: 4 minutes  
(Taken from DoE Nov 2008)

- Product recognition and differentiation ✓✓
- Extended shopping and business hours ✓✓
- Doing business over the internet ✓✓
- After-sales service ✓✓
- Offering additional services (free travel insurance by banks) ✓✓
- Loyalty rewards for customers ✓✓
- Door-to-door deliveries ✓✓
- Building brand loyalty ✓✓
- Advertisements ✓✓

(Accept any other relevant forms from an approved source)  
(Any 3 x 2) [6]

QUESTION 3: 10 minutes  
(Taken from DoE Nov 2008)

- Explicit collusion ✓✓ is usually illegal between firms within countries. ✓✓
- However, firms are still tempted to practise implicit collusion ✓✓. In other words, they act together to produce the profit maximising output but they do it in such a way that it is very difficult to prove that they have colluded. ✓✓

QUESTION 4: 6 minutes  
(Taken from DoE Nov 2010)

4.1  
- Increase efficiency in the market ✓✓
- Improve equity in the markets ✓✓
- Contribute to developmental objectives ✓✓
- Prevent monopoly power / abuse of economic power ✓✓
- Regulate growth of acquisitions (takeovers) and mergers ✓✓
- Prevent restrictive practices ✓✓
- Promote competition ✓✓
- Exploit advantages of scale to benefit society in general ✓✓
- Eliminate price fixing ✓✓

(Accept any other relevant response)  
(Any 2 x 2) (4)
4.2 Grant the order / confirm the penalty (order) imposed on the company by the Competition Commission. ✓ ✓ ✓ (3)

4.3 Competition Appeal Court. ✓ ✓ ✓ (3)

QUESTION 5: 5 minutes (Taken from DoE Nov 2010)

- Oligopolists do not compete with each other on price because price wars will not benefit them. ✓ ✓
- Prices are determined by mutual agreement. ✓ ✓
- They compete with each other on product differentiation and efficient service. ✓ ✓
- Convenience shopping ✓ ✓
- E.g. extended shopping hours ✓ ✓
- Firms make use of advertisements to increase awareness and to lure customers towards their products. ✓ ✓
- E.g. Pick 'n Pay use extensive advertising to increase market share. ✓ ✓
- Non-price competition builds brand loyalty and product recognition. ✓ ✓
- E.g. after sales service, loyalty rewards. ✓ ✓

(Accept examples for maximum of 2 marks) (Any 4 x 2) [8]