GRADE 12

Economics
SELF STUDY GUIDE
BOOKLET 4
Dynamics of Markets

1.   INTRODUCTION

The declaration of COVID-19 as a global pandemic by the World Health Organisation led to the disruption of effective teaching and learning in many schools in South Africa. The majority of learners in various grades spent less time in class due to the phased-in approach and rotational/ alternate attendance system that was implemented by various provinces. Consequently, most schools were not able to complete all the relevant content designed for specific grades in accordance with the Curriculum and Assessment Policy Statements in most subjects.

As part of mitigating against the impact of COVID-19 on the current Grade 12, the Department of Basic Education (DBE) worked in collaboration with subject specialists from various Provincial Education Departments (PEDs) developed this Self-Study Guide. The Study Guide covers those topics, skills and concepts that are located in Grade 12, that are critical to lay the foundation for Grade 12. The main aim is to close the pre-existing content gaps to strengthen the mastery of subject knowledge in Grade 12. More importantly, the Study Guide will engender the attitudes in the learners to learning independently while mastering the core cross-cutting concepts.
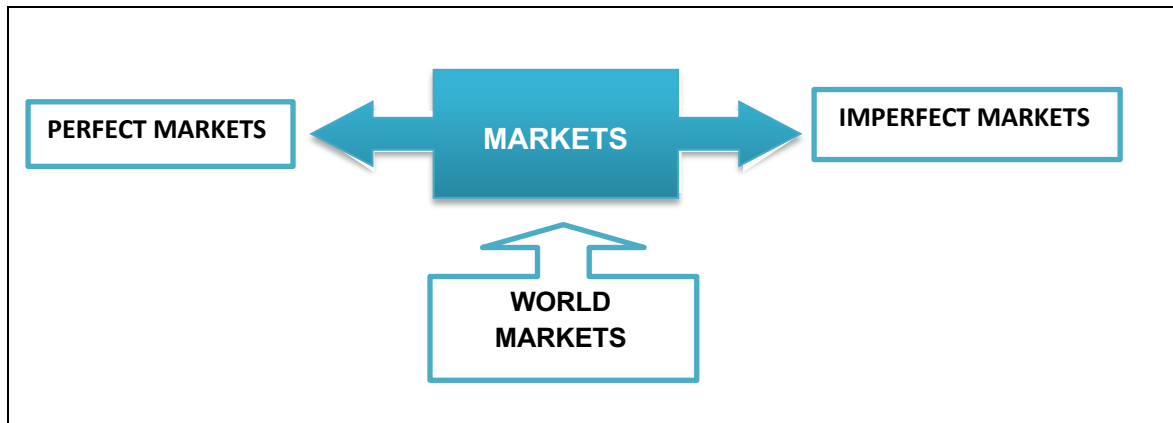
2. HOW TO USE THIS SELF STUDY GUIDE?

1. This Study Guide address content and offer strategies to understand the different aspects of assessing Dynamics of market in a piecemeal approach, with consolidation activities to conclude.

2. The explanations and activities are intended to supplement the work you may have covered in class or have gained from textbooks and not replace them.

3. Activities proceed from the low order, simple focused examples to middle order with paragraph and graphical construction and interpretation and finally higher order questions that require application of knowledge that may not be available in the textbooks.

4. It is important to allocate sufficient time to:
    ● Carefully read the explanations provided; underline or highlight key concepts, difficult vocabulary, important data, and relevant data.
    ● Underline key concepts within the question and ensure that correct interpretation is done before attempting the question.

5. Attempt the activities on your own; make constant reference to the explanatory notes but avoid referring to the suggested answers before attempting answering an activity.

6. Compare your answers to the suggested answers and do your corrections in a different colour-ink pen. Note that you will learn more by discovering your weaknesses (when you get things wrong) and making an effort to understand why your thinking was out of line with what was expected.

7. The activities provided may not be sufficient to perfect your skills. Always refer to similar questions from past examination papers for this purpose. Repetitive practice is always valuable.

8. Familiarize yourself with the use of Answer Books and prepared writing material as this is the norm with all Economics examinations.

3.DYNAMICS OF PERFECT MARKETS

3.1 GRADE 10: DYNAMICS OF MARKETS

10.1 Types of markets

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│ PERFECT MARKETS  │◄───│   MARKETS   │───►│  IMPERFECT MARKETS   │
└──────────────────┘    │             │    └──────────────────────┘
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                              ▲
                        ┌─────────────┐
                        │    WORLD    │
                        │   MARKETS   │
                        └─────────────┘
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10.2 Four main characteristics / conditions of markets

CONCEPT	DESCRIPTION
Perfect market	Is a market structure in which no supplier can manipulate the price?
Homogeneous	Products that are identical / same
Price taker	A seller in a market who cannot control or influence the price of the goods he sells. The prices are determined by market forces
Price maker	A seller in a market structure who can set or influence the price of a good or service.

Notes:
- The common feature of all markets is that there is interaction between buyers and sellers.
- Imperfect markets are classified into the following three market structures:
  - ➢ Monopoly – a market structure with only one seller
  - ➢ Oligopoly – a market structure with few sellers
  - ➢ Monopolistic competition – a market structure with many buyers and sellers, entry is relatively easy, but the product is differentiated. -

CONDITION	PERFECT MARKET	IMPERFECT MARKET
Number of producers	There are many suppliers.	There is only one large supplier of a good or service (Monopoly); and few large suppliers in the case of an oligopoly
Nature of the product	Products are homogeneous - exactly the same in type, quality and appearance.	The good or service is either unique, differentiated, or homogeneous
Barriers to entry	There are no barriers to entry and suppliers can enter or exit the market freely	Entry into the market is restricted so that new suppliers cannot enter the market.
Availability of information	There is complete information available to producers and consumers about market conditions	Consumers and producers have incomplete knowledge about market conditions.
Control over price	Suppliers do not have control over price. Are called price takers.	Monopoly are price makers Oligopolies have substantial control over market price but are not price makers Monopolistic competition has limited control over price
Examples	Farmers	Toothpaste and clothing industry

Conditions of world markets

- There must be a wide demand of a product such as necessities
- The product must be transportable
- The costs of transport must be small in relation to the value of the product.
- The product must be durable - must not be perishable products.
- Entry must not be restricted but government can use import measures to keep unwanted goods and services out of their countries.

Examination tips:

- Study the key concepts with understanding.
- You should be able to discuss the characteristics / conditions of each type of market.
- You should be able to relate each good to a particular type of market

3. 2 GRADE 11: MARKET STRUCTURES

11.1 Four market structures and their characteristics:

CONCEPT	DESCRIPTION
Perfect competition	Is a market structure where many firms offer homogeneous product.
Imperfect market	Occurs when any of the conditions of the perfect competition do not exist.
Market share	The number of customers each firm has access to in relation to other firms in the market.
Price taker	Firms that are not able to determine / decide their own prices
Price maker	Firms that can influence the market price.
Collusion	An arrangement between businesses with the aim of limiting competition between them by fixing prices.
Homogeneous product	Products are exactly the same in type, quality and appearance.
Heterogeneous / non-homogeneous product	Products that are not the same in type, quality, and appearance.
Normal profit	The minimum earnings required to prevent the entrepreneur from leaving and applying his factors of production somewhere else.
Economic profit	A profit that exceeds normal profit. Is also called excess or supernormal profit.
Monopoly	A market structure with only one seller who sells a unique product with no close substitutes.
Oligopoly	A market structure with few sellers who sell differentiated products.
Monopolistic competition	A market structure with many buyers and sellers where entry is relatively easy, but the product is differentiated.

Notes:

A market is **perfectly competitive** when there is no excessive control or power from buyers or sellers. Sellers should not be able to charge higher prices to increase their profit. Market structure influences the way in which markets function and the relationship between markets. It is important for learners to understand the **interaction (relationship) between factor market and product market** as it is discussed in the Circular flow model – an increase in demand for clothing (goods markets) increases the demand for labour (factor market) as the industry is labour-intensive. It is important to use resources efficiently to produce goods and services that we need.

Markets are classified into two types: Perfect markets and imperfect markets. In this grade, learners should know by heart the market structures under each type of market as well as the characteristcs / conditions for each market structure in detail.

Perfect market has a perfect competition as a market structure. The agricultural products are relatively easy to produce hence there are many farmers in South Africa with homogeneous products such as vegetables, fruits and milk. These firms will make economic profits in the short-run and normal profits in the long-run.

Can you discuss the characteristics / conditions of a perfect competition?

1. Many buyers – there are many consumers who cannot influence the price.
2. Many sellers – there are many producers
3. Products are homogeneous / identical.

4. Non-price competition sellers do not compete with one another on price because products are exactly the same.
5. Examples include fresh produce market (agricultural products)

Conditions of a perfect competition
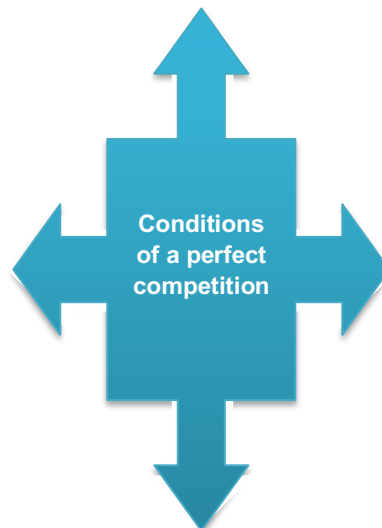
6. Entry and exit is completely easy or free
7. Collusion is not allowed – it is impossible for firms to collude because they are so many
8. Control over market price – sellers are price takers / do not have control over market price.

9. Demand curve is a horizontal line (perfectly competitive).

10. Profit / loss – firms can make economic profit during short-run and normal profit in the long-run.

Price determination in perfect markets

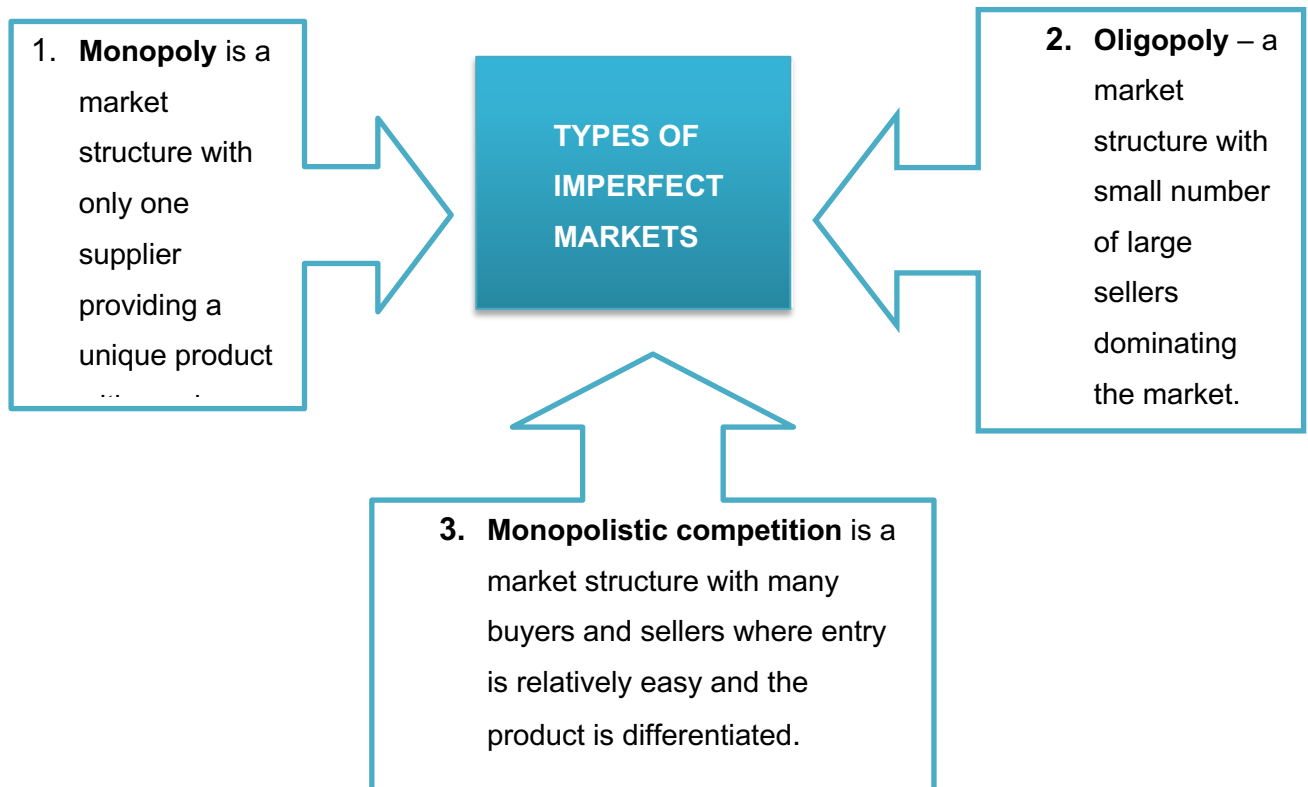Market   Firm
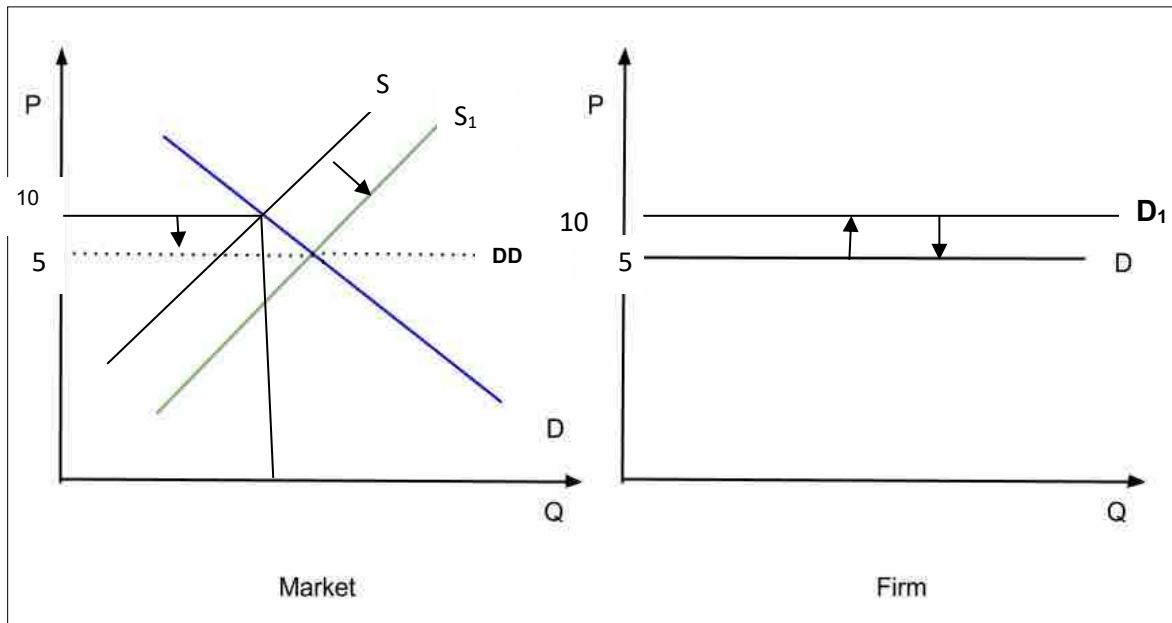
The price charged in perfect markets is determined by the forces of demand and supply. New firms can enter the market easily (with no restrictions in the form of barriers such as huge capital outlay required), each new firm entering will force the price down. In the above diagram, the market initially determines a price of R10, new firms shift the supply curve from SS to S_1S_1 and the price for the market decrease to R5. The individual firm has to charge the same price as the market. If they charge higher price, (R10) they will lose customers to any other competitor (because products are homogeneous). Remember that the individual firm is a price taker, the demand curve is a horizontal line or is perfectly elastic.

Characteristics / conditions of imperfect markets

1. Market power – the seller is either the only supplier or may face limited competition from few other large firms all of whom have a large market share.
2. Control over price – firms are price setters / maker – have influence on price. They are able to charge a price that suits them and can restrict output.
3. Nature of the products – products are heterogeneous. Even though products are similar, these firms change certain feaures of the product.
4. Information – for a monopoly information is complete but for oligopoly and monopolistic competition is incomplete.
5. Non-price competition – there is no competition for monopoly whilst there it is availbale for oligopoly and monopolistic competition through advertising, after-sales service, building brand loyalty, extended shopping hours, loyalty rewards for customers, door-to-door deliveries and product differentiation..

6. Barriers to entry – there are barriers to entry such as patents, government regulations – huge capital outlay, control over price, other forms of intellectual and property rights
7. Collusion – is impossible for a monopoly and monopolistic competition whilst possible for an oligopolist.
8. Output – is low for monopoly and relatively higher for oligopoly, whilst monopolistic competitor's output is relatively high.
9. Demand curve – downward sloping for a monopoly and monopolistic competition whilst kinked for oligopoly.
10. Long-run economic profit – it is possible for monopoly and monopolistic competition but impossible for oligoploy (they can only make normal profit).
11. Examples of each market structure include the following:
    - Monopoly – Eskom
    - Oligopoly – cellularphone network; banking sector and
    - Monopolistic competition – fast food outlets, restaurants; clothing industry.

1. **Monopoly** is a market structure with only one supplier providing a unique product

TYPES OF IMPERFECT MARKETS

2. **Oligopoly** – a market structure with small number of large sellers dominating the market.

3. **Monopolistic competition** is a market structure with many buyers and sellers where entry is relatively easy and the product is differentiated.

SUMMARISE DIFFERENCES BETWEEN THE FOUR MARKET STRUCTURE MODELS

CRITERIA	PERFECT COMPETITION	MONOPOLY	OLIGOPOLY	MONOPOLISTIC COMPETITION
Price	The price is low. It is determined by the market and the firm has no market power.	The price is high because the firm has market power.	The price is high as few firms are able to dominate the market with little competition between them.	A small number of firms are able to charge higher prices but competition keeps prices relatively low.
Output	Output is high. The firm has no choice but to provide whatever quantity the market require.	Output is limited to the individula firm's output as the firm is the market (single seller).	The ouput is higher than under monopoly but is still restricted from 3 to 5 large firms.	Due to the existence of many supplies, output is high across most of the market.
Barriers to entry	There are no barriers to entry and new firms can enter the market at will.	There are high barriers to entry as the firm uses marketing and technical knowledge to restrict entry.	High, but not as high as monopoly. Start-up costs and advertising prevent new firms entering with ease.	Barriers are low or non-existent. Some firms are merely able to market their product more efficiently than others.
Availability of information	Any new firm entering the market has perfect information.	The technical knowledge referred to above is not available to new firms.	Existing firms in the market may have technical information that new entrants are unable to acquire.	Any new firm entering the market has perfect information.
Size of profits	Profits are normal only.	Economic profits are made in the long run.	Economic profits are made in the long run.	Are small and limited to normal.
Nature of the product	The product is homogeneous and easy to reproduce at low cost.	Unique product with no close substitute.	Heterogeneous product.	The product is homogeneous with some suppliers making clever / fine differences.

Activity 1

Supply a concept for the following descriptions:

1.1 Occurs when the seller do not have influence on the price.

1.2 An arrangement between businesses with the aim of limiting competition between them by fixing prices

1.3 Products that are exactly the same in terms of type, quality, size and appearance

1.4 Refers to the only seller or producer of a product or service   (4 x 1) (4)

Activity 2

Study the cartoon below and answer the questions that follow:

Real World Examples of Price Wars

Non-price measures can attract customers

Low cost airlines

Supermarket petrol retailers

Mobile phone tariffs

Source: Line.QQ17.com

2.1 Which market structure is represented by the above cartoon?   (1)

2.2 Identify one characteristic of this market structure from the cartoon.   (1)

2.3 Briefly describe the term *imperfect market.*   (2)

2.4 What causes price wars in this market structure?   (2)

2.5 Why is the government against collusion?   (4)

Activity 3

With the aid of an individual firm graph, explain why it is important to charge the same price as the market. (8)

General Examination tips:

- Study the concepts with understanding – do not memorise.
- Be able to provide examples of each market structure.
- Be able to explain or discuss each characteristic in detail.
- Check mark allocation because it determine the length of your response.

Answers:

Activity 1

1.1 Price taker.√
1.2 Collusion√
1.3 Homogeneous products√
1.4 Monopoly √ (4 x 1) (4)

Activity 2: Data response

2.1 **Which market structure is represented by the above cartoon?**

- Oligopoly√ (1)

2.2 **Identify one characteristic of this market structure from the cartoon.**
- Non-price competition√ (1)

2.3 **Briefly describe the term *imperfect market.***
- Occurs when any of the conditions of the perfect competition do not exist√√

(2)

2.4 **What causes price wars in this market structure?**

- Are caused by frequent changes in prices in order to increase market share√√

(2)

2.5 Why is the government against collusion?

- Sellers collude to gain market share by raising prices and by restricting production√√
- This situation will disadvantage customers because they will not afford higher prices or will buy few products at higher prices√√
- The economic activities will decline as well as economic development√√

(Accept any other correct relevant response) (Any 2 x 2) (4)

Activity 3

With the aid of an individual firm graph, explain why it is important to charge the same price as the market?

Explanation:	
- The individual firm has to charge the same price of R4 as the market.√√ - If they charge higher price, (R5) they will lose customers to any other competitor (because products are homogeneous). √√ - The firm can decrease the price to R4 in order to attract more customers. √√ - The main reason is that the individual firm is a price taker, the demand curve is a horizontal line that is perfectly elastic. √√	
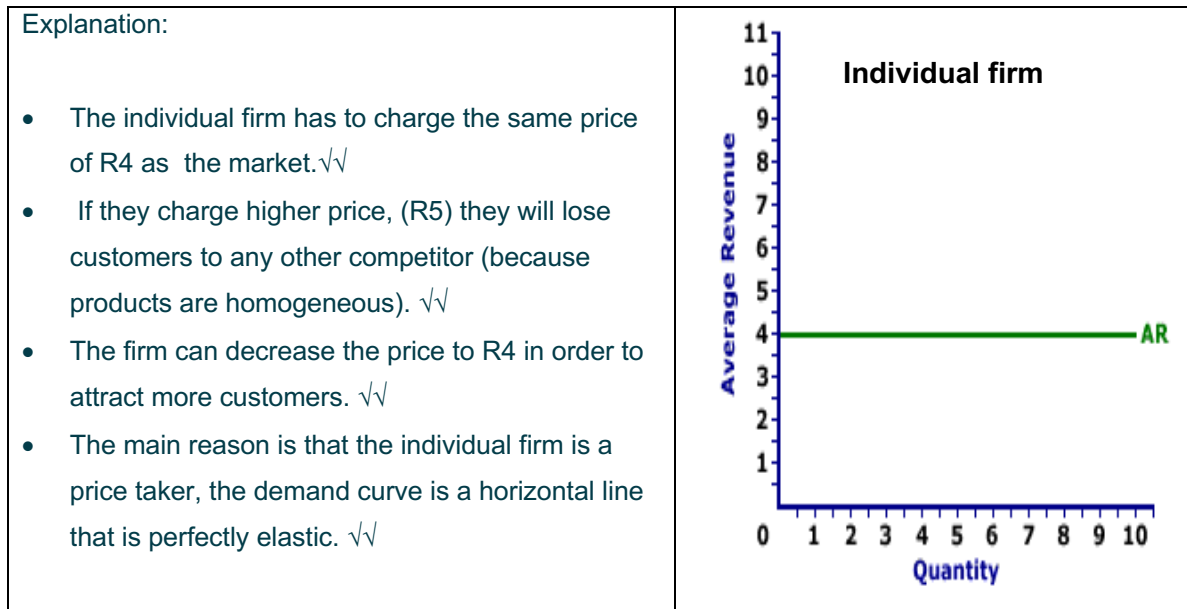
11.2 Effects of costs and revenue

CONCEPT	DESCRIPTION
Public company	A large business that is owned by a shareholder and run by a board of directors
Stakeholders	People with an interest in the success of the business.
Profit maximisation	A point where MR = MC or TR = TC or AR = AC
Revenue	The amount of income the business makes from selling goods and services.
Sales	The number of units of a good or service sold.
Capital	The inputs used in the production process such as machinery.

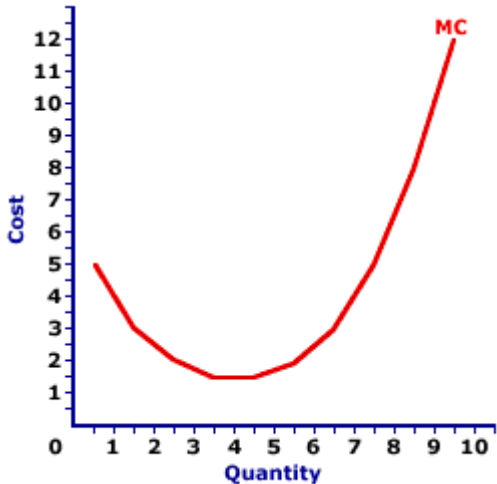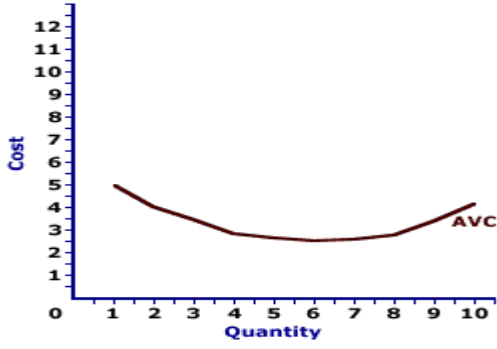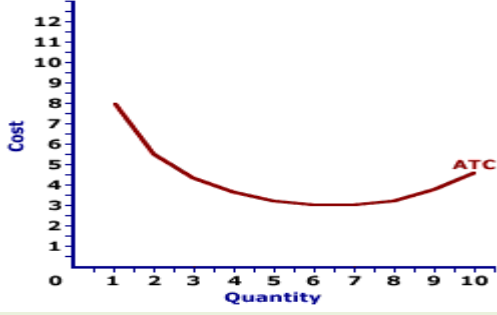|	
Fixed costs	The costs that remain the same / constant irrespective of the level of output.
Variable costs	The costs that vary / differs with the level of output, example material.
Law of diminishing returns / law of variable proportions	It states that as more of a *variable input* is used (while other inputs remain the same) each additional unit of the variable input will eventually produce less and less additional output. Therefore, the marginal product of the variable declines.
Short run	A period that is too short for a business to vary all inputs, including fixed costs.
Long-run	A period that is long enough so that a business can vary all inputs, including fixed costs.
Economies of scale	Decreasing average costs as the costs are divided over more units of output.
Diseconomies of scale	Increasing average costs as the contribution of the variable inputs becomes more expensive.
Normal profit	Is the minimum earnings required to prevent the entrepreneur from leaving the business and apply the factors of production elsewhere?
Economic profit	The profit that exceeds normal profit. It is also called excess or supernormal profit.
Economic loss	When the difference between revenue and costs is negative.
Implicit costs	Refers to the value of inputs owned by entrepreneurs and used in the production process. Are also known as hidden costs. Are always less than explicit costs, examples include an acceptable remuneration for the entrepreneur and the opportunity cost of the factors of production.
Explicit costs	Actual expenditure of business such as wages and interest, purchase of raw materials as well as interest paid

Notes:
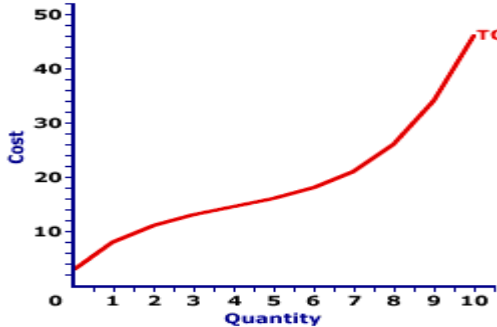
What are the goals of the business? Goals of the business should be SMART

- Specific – the idea must be identified and understood.

- Measurable – it must be possible to test or measure whether the goal has been reached.

- Agreed – in larger companies, there will be many stakeholders with an interest in the success of the business.

- Realistic – goal must not be out of reach for the business but should be able to generate the required profit.

- Time specific – there must be time frame / limit on achieveing the goal.

Constraints faced by new firms include the following:
- High set up /start-up costs
- Lack of knowledge of the market
- Strong competition from other firms

CURVE	DESCRIPTION OF THE CURVE	SHAPE

Study the short-run cost concepts, shape of the curve and calculations with understanding

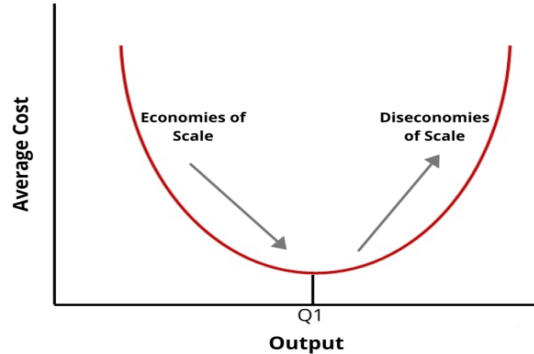| CURVE	DESCRIPTION OF THE CURVE	SHAPE
Total cost (TC)	• Is the cost of all the units produced or • Is the sum of the variable and fixed costs. • TC = FC + VC	
Marginal cost (MC)	• Refers to the additional cost incurred to produce one more unit of a product. • MC = $\frac{\Delta TC}{\Delta Q}$ • Trend / pattern of the MC, first decrease until reaches the lowest point and then it starts to increase (slopes upwards).	
Average variable cost (AVC)	• Refers to the variable cost incurred per unit . • AVC = $\frac{VC}{Q}$ • The AVC has a U-shape	
Average total cost (ATC or AC)	• Refers to the cost per unit of production. • Is equal to the total cost divided by the number of units produced. • ATC / AC = $\frac{TC}{Q}$ • The AC has a U-shape.	

	• It will always be above the AVC curve.
Fixed costs (FC)	• Are costs that remain the same irrespective of the level of output • Examples include rent, insurance payment, etc
Variable costs (VC)	• Are costs that changes with the level of output. • An increase in output lead to an increase in variable costs • Examples include material, electricity, etc

Cost schedule: Determine the missing values (A – K) from the table

Quantity	Fixed costs	Variable costs	Total costs TC=FC + VC	Average total costs AC = $\frac{TC}{Q}$	Marginal costs MC = $\frac{\Delta TC}{\Delta Q}$
0	100	0	D	-	-
5	100	80	E	36	I
10	100	110	F	21	J
15	100	A	260	G	K
20	100	B	340	17	16
25	100	C	460	H	24

	Study the long-run cost concepts, shape of the curves and calculations with understanding	
CURVES	**DESCRIPTION OF THE CURVE**	**SHAPE**
Total revenue (TR)	• Is the value of all the sales that have taken place • TR = P x Q • Is a straight line that slopes upwards.	
Marginal revenue (MR)	• Refers to the additional income received from selling one more unit. • **MR = $\frac{\Delta TR}{\Delta Q}$** • In a perfect market, it is represented by a horizontal line on the level of market price.	
Average revenue (AR)	• Refers to the revenue earned per unit. • **AR = $\frac{TR}{Q}$** • In the perfect market, AR and MR curves are the same curve.	
Economies and diseconomies of scale	• **Economies of scale** means a reduction in the per unit costs of a product as a firm's product increases. • **Diseconomies of scale** occur when average unit costs start to increase	

Revenue schedule: Practice - Determine the missing values from the table below

QUANTITY	PRICE	TOTAL REVENUE	AVERAGE REVENUE $AR = \frac{TR}{Q}$	MARGINAL REVENUE $MR = \frac{\Delta TR}{\Delta Q}$
0	0	0	-	
1	10	10	**C**	10
2	9	18	**D**	8
3	8	**A**	8	6
4	7	**B**	7	**E**
5	6	30	6	**F**

NB: Please take note that AR and MR at quantity 0 do not exist. Also, the values for P and AR are the same.

In the perfect market, AR and P curves are the same whilst in the imperfect market MR lies below the AR curve.

3.3 GRADE 12: PERFECT MARKET

12.1 Characteristics / features

CONCEPT	DESCRIPTION
Market structure	Refers to the organisational structure of a market.
Perfect competition	A market structure where there are many buyers and sellers, who sell homogeneous products and are price takers.
Price taker	A seller in a market who cannot control or influence the price of the goods he sells. The prices are determined by market forces.
Collusion	Occurs when sellers or buyers enter into an agreement / arrangement of influencing the market price. The purpose is to limit competition in the market.
Homogeneous	Products are exactly the same in type, quality and appearance.

Notes:

A market structure takes into account <u>various factors</u> that determine how buyers and sellers interact in a market.

Characteristics / conditions of perfect competition

1. **Many buyers** – an individual cannot influence the market price.
2. **Many sellers** – an individual seller is a price taker and has to sell at the current market price.
3. **No preferential treatment** – buyers can buy from any seller.
4. **No collusion** – each seller act independently.
5. **Freedom of entry and exit** – the market is totally accessible. There are no barriers to entry in the form of legal, financial, technological, physical or other restrictions that stops the free movement of buyers, sellers and producers.
6. **Perfect knowledge** – both buyers and sellers have full knowledge of all the current market conditions such as production costs, market opportunities, price, quality and the availability of goods and services.
7. **Nature of the products** – buyers cannot distinguish whether the products are from which seller because they are exactly the identical (homogeneous).
8. **No government intervention** – it is an unregulated market because the government does not interfere in the market.
9. **communication** – is reliable and effective and this makes the access to the markets possible.
10. **Mobility of the factors of production** – factors of production such as labour, capital and entrepreneurship *can easily move from one geographical area to the next* and from one industry to the next.
11. **Effective transport and communication** transport and communication are reliable and effective. This makes the access to the market possible.
12. **Profits** – the perfect competitor can only make economic profit in the short term and will make normal profits in the long term.
13. **Price determination** – the market / industry determines the market price for the individual firm. The firms are price takers and have a horizontal demand curve.

14. **Efficiency** – the following are the two types of efficiency:

> ➤ **Productive efficiency** – resources resulting in the *highest number of goods and services at least cost.* Therefore, the perfect competitor produces at the lowest cost over the long run.

> ➤ **Allocative efficiency** - is reached when the quantity and type of goods and services produced are the best for all the consumers. Production takes place through the effective utilization of all the resources resulting in the *highest number of goods and services at least cost.* Therefore, the perfect competitor produces at the lowest cost over the long run.

Activity 1

Give ONE term for each of the following descriptions. Write only the term next to the question number (1.1 – 1.6) in the ANSWER BOOK. Accronyms, abbreviations and examples will NOT be accepted.

1.1 An arrangement between businesses with the aim of limiting competition

1.2 Buyers and sellers are kept informed about market conditions

1.3 A market where no single buyer or seller has a noticeable influence on the price of a good

1.4 A situation where sellers accept the prevailing market price

1.5 There are no restrictions that stops the free movement of buyers, sellers, and producers

1.6 Products that are identical and standardised   (6 x 1) (6)

Activity 2

Study the cartoon below and answer the questions that follow:

2.1 Name the type of market illustrated in the above cartoon.   (1)

2.2 What is the nature of products offered by the perfect competition?   (1)

2.3 Briefly describe the term *perfect competition*.   (2)

2.4 Briefly explain the benefit of an unregulated market..   (2)

2.5 How does technology play a vital role in the economy?   (2 x 2) (4)

[10]

Activity 3

3.1 Evaluate the importance of transport in the economy.   (8)

Solutions:

Activity 1

    1.1 Collusion√

    1.2 Efficient communication√

    1.3 Perfect market√

    1.4 Price taker√

    1.5 Freedom of entry and exit√

    1.6 Homogeneous√   (6 x 1) (6)

Activity 2: Data response

2.1 **Name the type of market illustrated in the above cartoon.**

- Perfect market√ (1)

2.2 **What is the nature of products offered by the perfect competition?**
- Homogeneous√ (1)

2.3 **Briefly describe the term *perfect competition*.**

- Perfect competition is a market structure where there are many buyers and sellers, who sell homogeneous products and are price takers. √√ (2)

2.4 **Briefly explain the benefit of an unregulated market.**

- Prices will be determined by market forces (forces of demand and supply)√√
- The government does not control the prices of goods and services√√ (2)

2.5 **How does technology play a vital role in the economy?**
- Efficient communication keeps buyers and sellers informed about market conditions. √√, examples of technology include access to the internet, cell-phones, etc√
- Sellers will be able to advertise their products through various forms of the media√√
- Buyers will have access to the global economy, to know the new products and be able to compare prices√√
- It also minimise big gatherings and consumer times by doing on-line shopping√√

(2 x 2) (4)

[10]

Activity 3

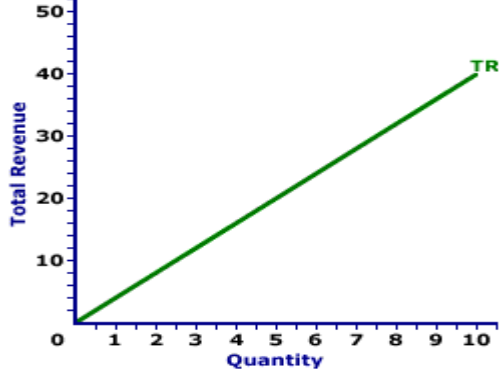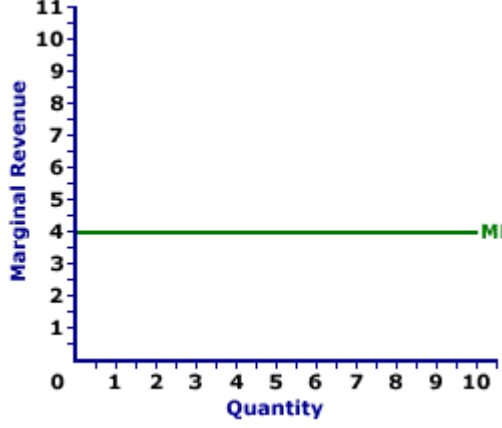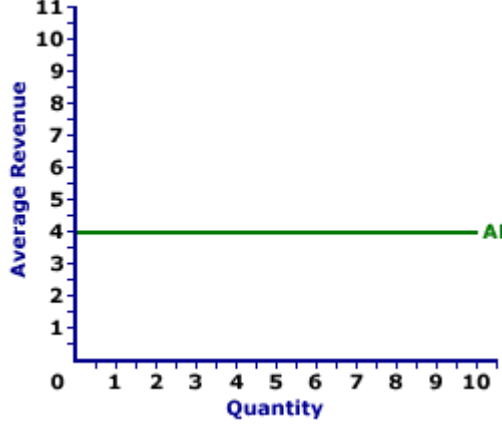3.1 **Evaluate the importance of transport in the economy**.

- Transport plays a vital role for it ensures that products are made available everywhere√√
- Efficient transport keeps buyers and sellers informed about market conditions√√
- Buyers and workers will be able to access various markets in the world√√
- Availability of different modes of transport facilitates trade for different products including those with shorter life-span such as perishable goods√√
- Production levels will increase because workers will be able to reach their work-stations on time√√ (8)

12.2 Individual business and industry:
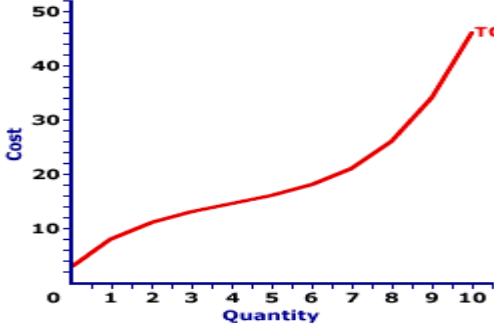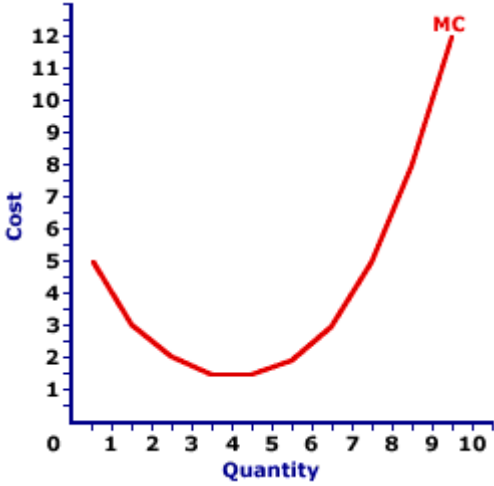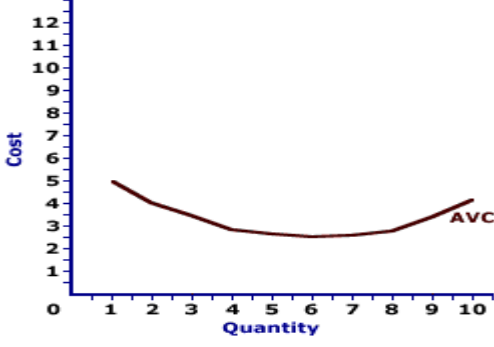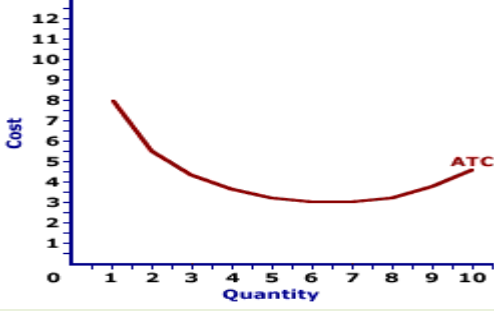
- An individual business.
- Price formation of an industry (perfect competition).
- Price formation of an individual business (perfect competition).

CONCEPT	DESCRIPTION
Demand curve for an individual business	The demand curve of an individual business is horizontal.
Industry	Refers to all the businesses that supply the same product in the market
Supply curve of an individual business	Refers to the upward sloping portion of the MC curve, i.e., above the lowest point of the AVC curve
Demand curve of the industry	Refers to the quantity of the good or service that *consumers are willing and able to buy* at a specific price and time.
Supply curve of the industry	Refers to the quantity of a good or service that *producers are willing and able to sell* at a specific price and time
Equilibrium of the industry	Is at the intersection of the industry's supply and demand curves.

Note well: It is important to revise and understand the shapes of the following Long –run revenue curves as they were discussed in Grade 11 syllabi:

CURVES	DESCRIPTION OF THE CURVE	SHAPE
Total revenue (TR)	• Is the value of all the sales that have taken place (TR = P x Q) • Is a straight line that slopes upwards.	
Marginal revenue (MR)	• Refers to the additional income received from selling one more unit. • MR = $\frac{\Delta TR}{\Delta Q}$ • In a perfect market is represented by a horizontal line that is the same as the price.	
Average revenue (AR)	• Refers to the revenue earned per unit. • AR = $\frac{TR}{Q}$ • In a perfect market, AR is the same as the MR curve.	

Note well: It is important to revise and understand the shapes of the following Short-run cost curves as they were discussed in Grade 11 syllabi:

CURVE	DESCRIPTION OF THE CURVE	SHAPE
Total cost (TC)	• Is the cost of all the units produced or • Is the sum of the variable and fixed costs. • TC = FC + VC	
Marginal cost (MC)	• Refers to the additional cost incurred to produce one more unit of a product. • MC = $\frac{\Delta TC}{\Delta Q}$ • Trend / pattern of the MC, first decrease until reaches the lowest point and then it starts to increase (slopes upwards).	
Average variable cost (AVC)	• Refers to the variable cost incurred per unit . • AVC = $\frac{VC}{Q}$ • The AVC has a U-shape	
Average total cost (ATC or AC)	• Refers to the cost per unit of production. • Is equal to the total cost divided by the number of units produced. • ATC / AC = $\frac{TC}{Q}$ • The AC has a U-shape. • It will always be above the AVC curve.	

Source: Encyclonomic

Use a graph to explain the effect on price of the individual producer if he increases or decreases his output (supply):	
• The demand curve for the individual business is a horizontal line because he is a price taker. • If the individual producer increases its supply, the supply curve will shift to the right from SS to S_1S_1. • At this point the equilibrium quantity has increased from Q to Q_1 but the equilibrium price has remained at P_1 • If the individual producer decreases its supply, the supply curve will shift from SS to S_2S_2 • The equilibrium quantity has decreased but the equilibrium price has remained constant at P_1 • The individual producer is not able to influence the equilibrium or market price by manipulating its supply.	
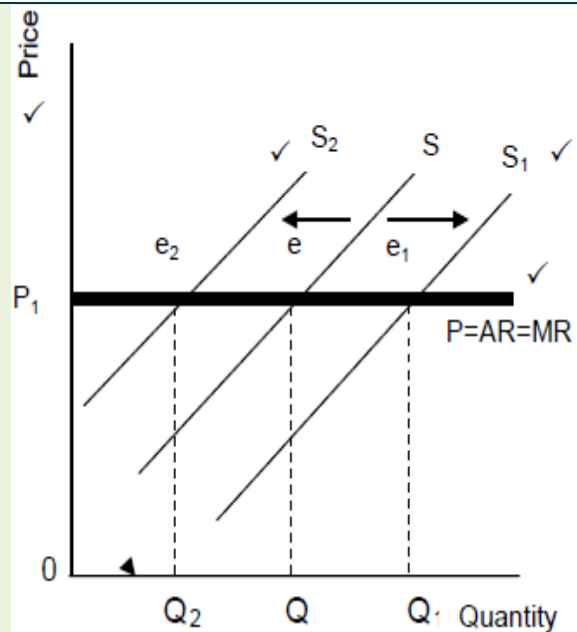
Use graphs to explain the derivation of the demand curve for the individual business. (Exam guideline)	
• The individual supply is derived by taking different market prices and determining how much the business should produce at each price • The individual firm maximise profit where the marginal revenue (MR) is equal to marginal cost (MC)–Point B • Provided that the average income (AR) is enough to cover the average variable cost (AVC) • Average variable costs comprise costs like labour cost, material costs, fuel and electricity costs • Under perfect conditions, the producer will produce where P=MR=MC. If AR=P>AVC • Thus, we derive that the supply curve of the firm is the section of the MC	 THE INDIVIDUAL PRODUCER

curve above the intersection with the AVC curve • The supply curve therefore is ABC on the graph • At P_1, no production will take place • At P_2, the AR=AVC, the firm will consider shutting down • At P_3, the AR=AC (break-even point), where normal profits are made. • At P_4, an economic profit will be made because AR is bigger than AC.	

Price formation of an individual business (perfect competition)
• The demand curve of a business in perfect competition is perfectly elastic • The smallest change in price will cause an infinitely large change in quantity demanded. • The business profit will be negativey affected, because an increase in price will force consumers to switch to another business because products are homogeneous and also consumers have perfect knowledge of producers. • Therefore, in perfect competition the horizontal curve also represents the AR and MR curves. • Perfectly elastic demand = market price = AR = MR

Activity 4

Choose a description in COLUMN B that matches an item in COLUMN A. Write only the letter of the correct answer (A – F) next to the question number (1.1 – 1.6) in the ANSWER BOOK.

COLUMN A	COLUMN B
4.1 Industry	A. Is determined by dividing the variable costs with output.
4.2 Individual producer	B. Refers to the cost per unit.
4.3 Marginal cost	C. Extra costs the firm incur for producing one extra unit.
4.4 Average revenue	D. A firm where prices are determined by market forces.
4.5 Average cost	E. Costs that remain the same irrespective of the output levels.
4.6 Average variable cost	F. The amount a firm earns for every unit sold.
	G. A price taker that sells goods at the market price.

(6 x 1) (6)

Activity 5

Study the table below and answer the questions that follow:

QUANTITY	PRICE	TOTAL REVENUE TR = P X Q	AVERAGE REVENUE AR = $\frac{TR}{Q}$	MARGINAL REVENUE MR = $\frac{\Delta TR}{\Delta Q}$
0	5	0	0	-
1	5	5	5	5
2	5	10	5	5
3	5	**A**	5	5
4	5	20	5	5
5	5	25	5	**B**
6		30	5	5

5.1 Write down another term for quantity. (1)

5.2 At what quantity will the producer earn maximum revenue? (1)

5.3 Briefly describe the term *marginal revenue*. (2)

5.4 Explain the relationship between the AR and MR. (2)

5.5 Determine the missing values A and B. Show all your calculations. (2 x 2) (4)

[10]

Activity 6

With the aid of graphs, analyse the relationship between an individual producer and industry under perfect market. (8)

Solutions:

Activity 4

4.1   D√

4.2   G√

4.3   C√

4.4   F√

4.5   B√

4.6   A√ (6 x 1) (6)

Activity 5: Data response

5.1 Write down another term for quantity.

- Output√ (1)

5.2 At what quantity will the producer earn maximum revenue?

- At quantity 6√ (1)

5.3 Briefly describe the concept *marginal revenue*.

- Marginal revenue refers to the additional / extra income the firm receives for selling one extra unit√√ (2)

5.4 Explain the relationship between the AR and MR.

- The relationship is that the values remain the same irrespective of the level of output√√
- They are represented by the same horizontal curve√√ (2)

5.5 Determine the missing values A and B. Show all your calculations.

• **A: TR = P x Q** **= 5 x 3√** **= R15√**	**B: MR = $\frac{\Delta TR}{\Delta Q}$ =** $\frac{30-25}{6-5}$ √ **= 5√**

(2 x 2) (4)

Activity 6

Demand curve for the market ✓

Demand curve of a perfect Competitor ✓
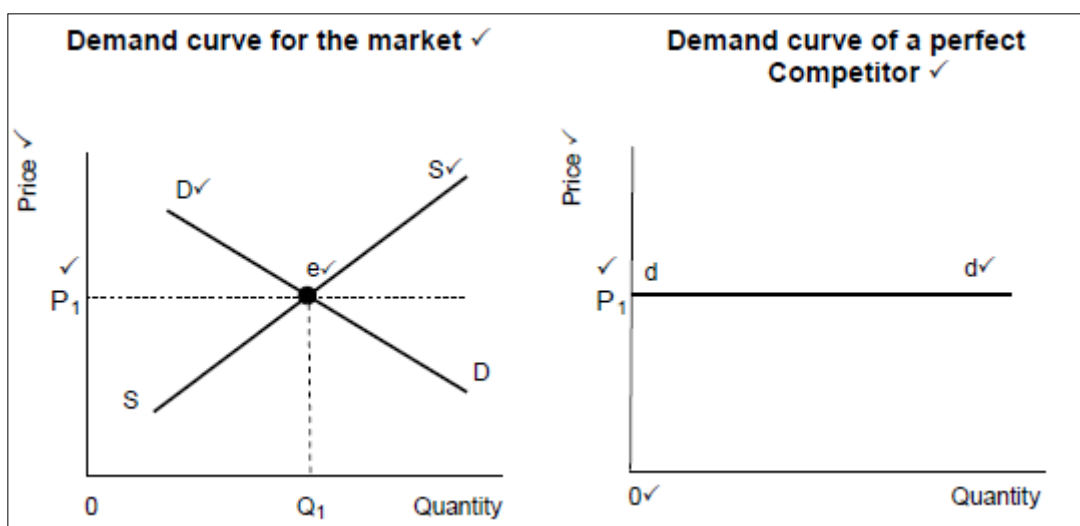
Labelling of axes = 1 mark
Labelling on axes = 1 mark
Correct SS curve = 1 mark
Correct DD curve = 1 mark
Correct equilibrium = 1 mark
Heading   = 1 mark

Max. 4

Explanation:

- In a perfectly competitive market, the price of a product is determined by the interaction between market demand and market supply for the product √√
- The market demand curve is represented by demand curve (DD) which is downward sloping and the supply curve (SS)which is upward slopping. √√
- As a result of the interaction between market demand and market supply, the equilibrium is established at P$_1$. √√
- Extending this price in the graph of the individual producer, the demand curve for the firm is horizontal – indicates that the individual producer is a price taker. √√

  (Accept any other correct relevant response)   (Max 4) **[8]**

1.1 **Graphs to explain profit maximisation using:** TR-TC and MR-MC curves

CONCEPT	DESCRIPTION
Implicit cost	Refers to the value of inputs owned by entrepreneurs and used in the production process. Are also known as hidden costs. Are always less than explicit costs, examples include an acceptable remuneration for the entrepreneur and the opportunity cost of the factors of production.
Explicit cost	Actual expenditure of business such as wages and interest, purchase of raw materials as well as interest paid
Optimal	The best / highest point on the curve.
Output	the number of units produced during a certain period.
Profit maximising rule	A business will maximise profits when it produces at the output level where MR is equal to MC
Profit	The positive difference between revenue and costs
Normal profit	The minimum earnings required to prevent the entrepreneur from leaving the business and applying his production factors. Normal profit = revenue – costs (explicit and implicit)
Economic profit	Is also known as surplus, extra, excess, or supernormal profit. Is the profit a business makes that is more than the normal profit? Economic profit = revenue – costs (explicit + implicit)
Break-even point	Is the point where TR is equal to TC. Is also known as the normal profit.
Short run	Is the period of production where only the variable factors of production can change? The time is too short to permit the number of firms in the industry to change.
Long run	Is the period of production where all factors can change. The time is long enough for variable and fixed factors to change. It allows enough time for new firms to enter the industry or for existing firms to exit.

Important Notes:

- Economic profits do not last long under perfect competition, because more businesses will be attracted into the same market, and this will result to lower profits.
- The following are two conditions / approaches of profit maximisation rule:
  - **Total revenue – Total cost approach**: when the business produces at the output level where TR exceeds TC. The TR curve will be furthest or above the TC curve.
  - **How to identify the business maximum economic profit?**
    - By identifying the quantity at which TR is further above from TC curve.
  - **Marginal revenue-marginal cost approach**: MR should be greater than MC. When the MR is lesser than the MC, the business will reduce its output (minimise the costs / loss). When the MR is equal to the MC, the business will continue to produce on that output level because profits are maximised. This is called the profit maximisation rule.
  - **How to determine the business's optimum output level?**
    - Find the equilibrium point where MR intersect MC curve or TR intersect TC curve.
    - With reference to the diagram below, point a is profit maximisation because TR = TC. On the right of point, a (blue area), the firm is making a profit because TR > TC.
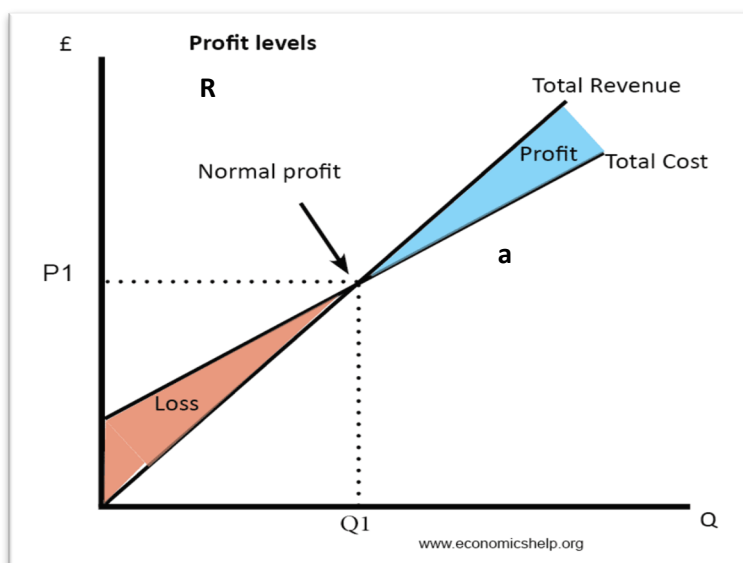
Handy Tips: How to draw graphs to show various equilibrium positions?

1. Draw TWO axes – vertical line (Price) and horizontal line (quantity / output).
2. Label the point where the two lines meet as 0 (point of origin)
3. Look at the schedule / table of values and decide on the scale to use for both price and quantity.
4. Draw the horizontal demand curve (DD) and remember that is the same as MR and AR curve under perfect competition.
5. Draw the AC curve – remember that it must be U-shape.
6. Draw the MC curve which must cut the AC curve at its lowest (minimum) point
7. Identify profit maximising point and label it is using a variable such as **a** or **c**
8. Determine the equilibrium quantity (maximum output) by making a line that starts from the profit maximisation point down to the vertical line
9. Determine the selling price, by drawing a line that starts from the profit maximising point to the DD/MR/AR curve, also extend it to the vertical line
10. Determine whether the firm is making a loss / profit by comparing the AR-AC or MR-MC values for that equilibrium quantity.

1.2 Discuss in detail various equilibrium positions with the aid of graphs:

Economic loss graph and explanation:
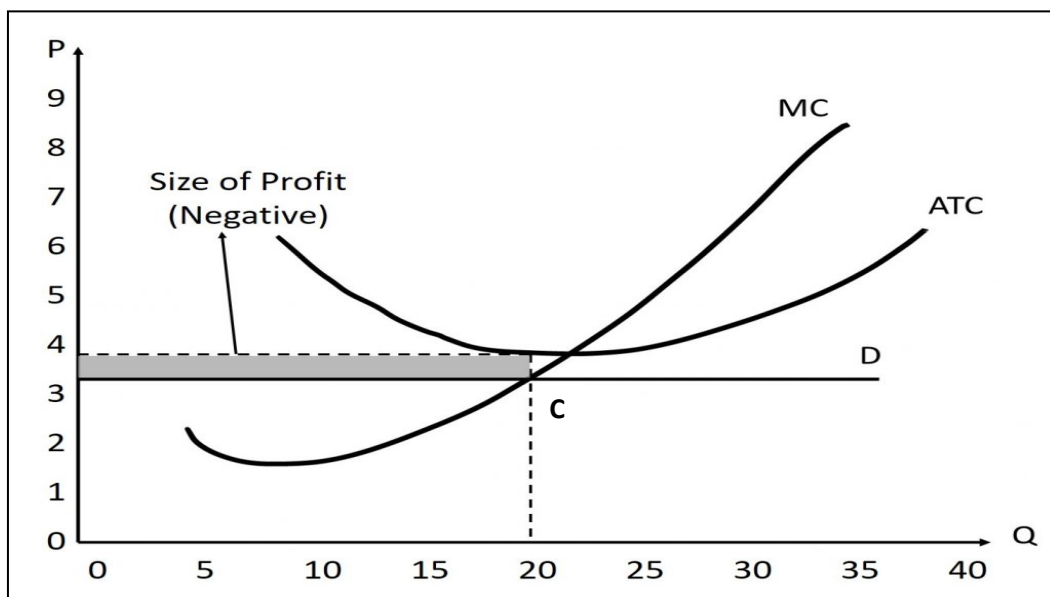
Explanation:

- The market price is at R3 because profit is maximized at point c (MR = MC)
- This occurs at a quantity of 20
- At output 20, the firm's average revenue (AR) per unit of production is R3
- The average cost per unit is R4, which is higher than the price of R3 (loss per unit is equal to –R1) and the total economic loss is equal to (-1 x 20) = -R20
- Therefore, the firm is making an economic loss per unit of production which is equal to the difference between R3 and R4 (shaded area).

Economic profit graph and explanation:
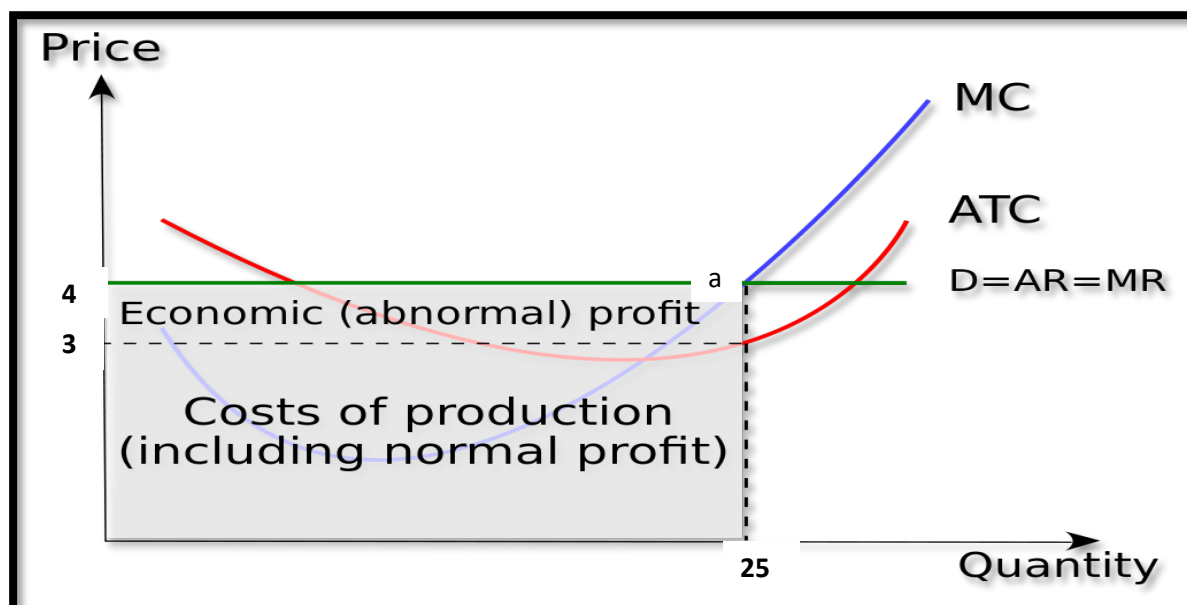
Explanation:

- The market price is at R4 because profit is maximized at point **a** (MR = MC = P)
- This occurs at a quantity 25
- At output 25, the firm's average revenue (AR) per unit of production is R4
- The average cost per unit is R3, which is lower than the price of R4 (profit per unit is R1) and the total economic profit is equal to (1 x 25) = R25 positive
- Therefore, the firm is making an economic profit per unit of production which is equal to the difference between R4 and R3 (shaded area)

Another explanation / method:

- Total revenue equals (P x Q), therefore total revenue is represented by the shaded area
- Total cost equals (P x Q), this is represented by the un-shaded area below R3
- The difference between these two areas is the economic profit
- Therefore, economic profit   = TR – TC

  = (P x Q) – (P x Q) = (4 x 25) – (3 x 25)

  = R100 – R75

  = R25

Activity 7

Give ONE term for each of the following descriptions. Write only the term next to the question number (1.1 – 1.6) in the ANSWER BOOK. Accronyms, abbreviations and examples will NOT be accepted.

7.1 The period of production where only the variable factors of production can change.

7.2 Break-even point is also known as

7.3 A situation when the lowest point of the average variable cost curve is higher than the market price

7.4 Costs that are classified as the actual expenditure of the business

7.5 The profit a business makes that is greater than the break-even point

7.6 The curve that will always cut the AC and AVC curves at their minimum point

(6 x 1) (6)

Activity 8

Study the diagram below and answer the questions that follow:
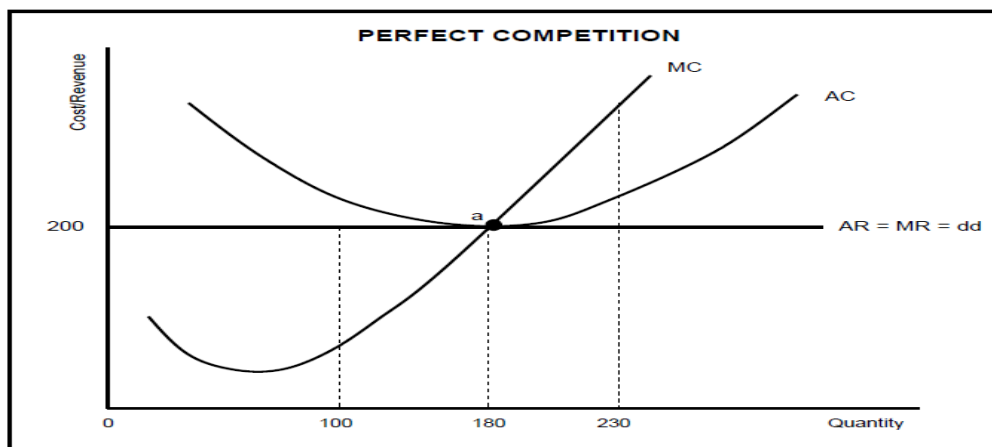
8.1 How many products will be produced at the point of equilibrium? (1)

8.2 Which curve represents the market price for the perfect competitor? (1)

8.3 Briefly describe the term *normal profit*. (2)

8.4 What would be the impact on the market if many firms leave this industry? (2)

8.5 Redraw the above graph and insert the average variable cost curve (AVC) to clearly indicate the shut-down point. (2 x 2) (4)

Activity 9

Without using a graph, explain why the price of a product under perfect competition will be equal to the lowest point on the long-run average cost curve. (8)

Solutions:

Activity 7

7.1 Short run√

7.2 Normal profit√

7.3 Shut-down rule√

7.4 Explicit costs√

7.5 Economic / supernormal profit√

7.6 Marginal cost√ (6 x 1) (6)

Activity 8

8.1 **How many products will be produced at the point of equilibrium?**

- 180√ (1)

8.2 **Which curve represents the market price for the perfect competitor?**

- AR / MR / DD√ (1)

8.3 **Briefly describe the term *normal profit*.**

- The minimum earning requires to prevent an entrepreneur from leaving the market / a situation where total cost is equal to total revenue√√

(2)

8.4 **What would be the impact on the market if many firms leave this industry?**

- The supply curve in the market will shift to the left / decrease in supply√√
- Market price will increase   √√ (2)

8.5 **Redraw the above graph and insert the average variable cost curve (AVC) to clearly indicate the shut-down point.**
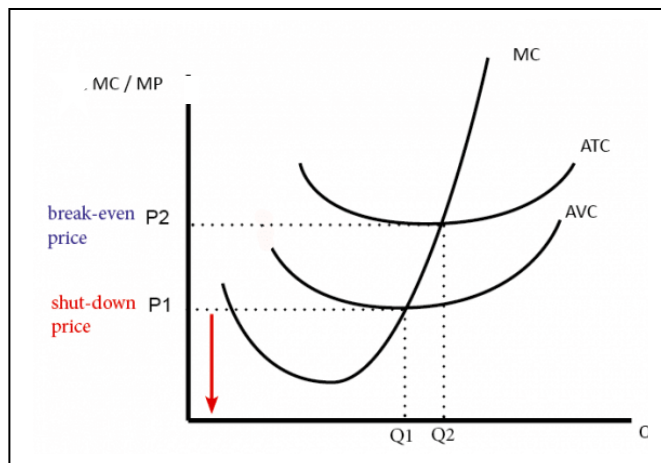
Correct shape and labelling of AVC = 2 marks

Correct labelling of shut-down = 2 marks

Activity 9

Without using a graph, explain why the price of a product under perfect competition will be equal to the lowest point on the long-run average cost curve.

- If the firm is making economic profit, it could adapt its production capacity by building a bigger production plant√√
- The industry can expand because new businesses could enter the market
- The increased production will push the market supply curve to the right thus lowering the market price√√
- Economic profits will eventually disappear due to falling average revenue√√
- Long run equilibrium is achieved where the lowest point of the AC curve is tangent to the demand / AR curve (which is also the price) √√
- If the business is making an economic loss, then firms will leave the business or cut back on production√√
- This will shift the market supply curve to the left thus increasing prices√√
- Economic loss will eventually disappear due to increasing average revenue√√
- This price will eventually be equal to the minimum point on the LAC curve i.e., normal profit√√
- Large scale production makes lower unit cost possible because of specialisation and improved technology√√

(Accept any other correct relevant response) (8)

4.TOPIC: DYNAMICS OF MARKETS: IMPERFECT MARKETS

Grade 12

Key Concepts

CONCEPT	DESCRIPTION
Monopoly	A market structure characterised by a single seller, selling a unique product in the market.
Oligopoly	A market structure wherein an industry is dominated by a small group of large sellers.
Monopolistic Competition	A market form which is characterised by many sellers selling similar but differentiated products.
Artificial Monopoly	Natural monopoly occurs when a large firm dominates the industry so much that it becomes difficult for others to enter.
Natural Monopoly	A type of monopoly that occurs due to high start-up costs
Legal Monopoly	A type of monopoly that is protected by law from its competitors.
Patent	this is the legal right of a holder to exclusively manufacture a product.
Cartel	A group of producers whose goal is to form a collective monopoly in order to fix prices and limit supply and competition
Collusion	An illegal arrangement between businesses rivals with the aim of limiting competition between them by fixing prices.
Tacit Collusion	It occurs where firms make informal agreement to charge prices established by a dominant firm.
Overt Collusion	Rival firms openly agree on price output and other decisions aimed at achieving economic profits.
Hybrid market	A market which has aspects of both perfect market and monopoly.

Notes: Imperfect Markets Explanation

Economists group markets in which competition is limited into **three** broad structures:

1.   Monopoly

Description

- A **monopoly** takes place where there is a single firm which supplies the entire market. E.g., Eskom,
- It is not easy for other businesses to enter the monopoly market because of strict barriers to entry.
- Unique products are sold in this market since there are no close substitutes.
- The firm has absolute market power and faces zero competition.

Characteristics of A Monopoly

Market power	• **In its pure form, a monopoly means the monopolist is the only firm in the market.** • **There are no other sellers and so the firm has complete market power.** • **This enables the monopolist to exert considerable influence over the buyers.**
Price maker/control over price	• the market power enables the monopolist to set its own price. • The monopolist cannot set the level of output and the price independently of each other. • If a monopolist wants to charge a higher price, it must sell fewer units of goods. Alternatively, a reduction in price will result in a higher output sold.
Demand curve	• A monopolist is confronted with a normal market demand curve, which slopes downwards from left to right. • 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
Barriers to entry	There are numerous barriers blocking firms from entering or exiting imperfect markets such as: **Government licenses/legal restrictions**: the state may regulate an industry to prevent undesirable or incompetent firms from entering. • A business may be prevented from producing a particular product because it does not have a license to do so. • This creates a monopoly for the firm in possession of the license. Some monopolies are created by law. • The government can pass a law that gives one firm exclusive right to produce a particular product. **High start-up costs**: these include costs such as capital investment and research and development that could be difficult for other firms to afford. **Patents**: these are legal rights granted to investors of a production process or service. • A person who invents a product is given special protection by government in the form of a patent. • This protects the inventor against competition for a certain period.

	• Whilst the patent is in force, the inventor therefore enjoys a monopoly.
	
	 Sunk costs: these are costs that cannot be retrieved if the business exits the industry.
	
	    • For example, the cost of advertising is very high and cannot be sold off in the same way that machinery and equipment can. So sunk costs are a barrier to exit.
	
	 Access to scarce resources: a natural monopoly is created if a single firm owns and controls a specific scarce resource.
	
	    • Other companies and potential competitors are therefore excluded from entering the market due to the unavailability of the resource.
	
	 Technical Superiority: a monopoly is created if a company possesses a technical advantage over its potential competition.
	
	    • e.g., Microsoft is the largest producer and supplier of computer technology and dominates the market with the Windows Operating Systems.
	
	    • Their experience, access to resources and technical superiority make it difficult for others to complete.

Profit	• Market power and high prices enables the monopoly to make economic profit in both short and long-run. • Apart from high prices and revenues, the monopoly is also able to use its bargaining power and superior knowledge of the market to reduce its costs of production
Economies of scale	• The mere size of large business gives it a cost advantage over a smaller rival. • This will make it impossible for smaller business to complete.
Information	• Monopoly has perfect information about the market, however new firms that wish to enter the market will not have the same information available to them.

Types of Monopoly

NATURAL MONOPOLIES	ARTIFICIAL MONOPOLIES:
High development costs prevent others from entering the market and therefore the government supplies the product. E.g., Electricity in South Africa is provided by the government enterprise, Eskom	Here the barriers to entry are not economic in nature. An example of a barrier is a patent. A patent is a legal and exclusive right to manufacture a product.
It costs billions of Rands to build and maintain power stations and therefore there are no other suppliers.	Market is big enough for competitors to do business yet cannot operate due to legal that may be taken.

The demand curve of the monopolist

- The firm uses its market power to set the price and are called **price makers**.
- The monopolist faces a normal market demand curve which slopes downwards from left to right.

The table below will be used to plot the shape of the average and revenue curves.

Price	Quantity	Total revenue	Average revenue	Marginal revenue
–	0	0	0	0
100	1	100	100	100
90	2	180	90	80
80	3	240	80	60
70	4	280	70	40
60	5	300	60	20
50	6	300	50	0
40	7	280	40	−20
30	8	240	30	−40

Graphical illustration of MR and AR curves

fig.1.1
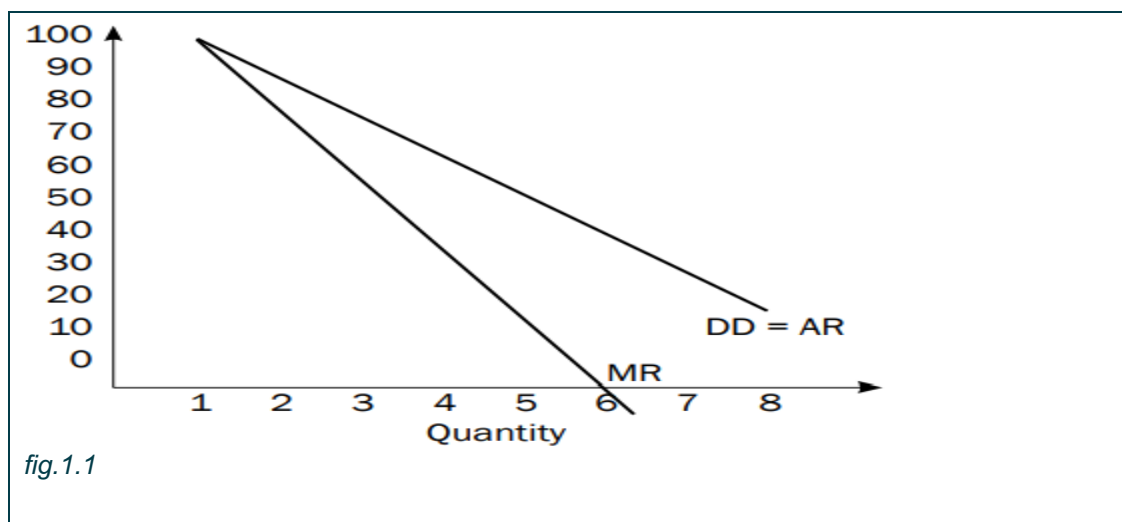
- Figure$_1$ shows the AR and MR curves for the price setting firm under imperfect competition.
- The AR and MR curves are separate curves.
- The MR curve falls at double the rate of the AR curve.

Profit maximisation by the Monopolist

- To maximise profit, the monopolist must produce at a point where MR = MC.
- MR and MC move in opposite direction. As output increases, marginal revenue decreases and marginal cost increases.
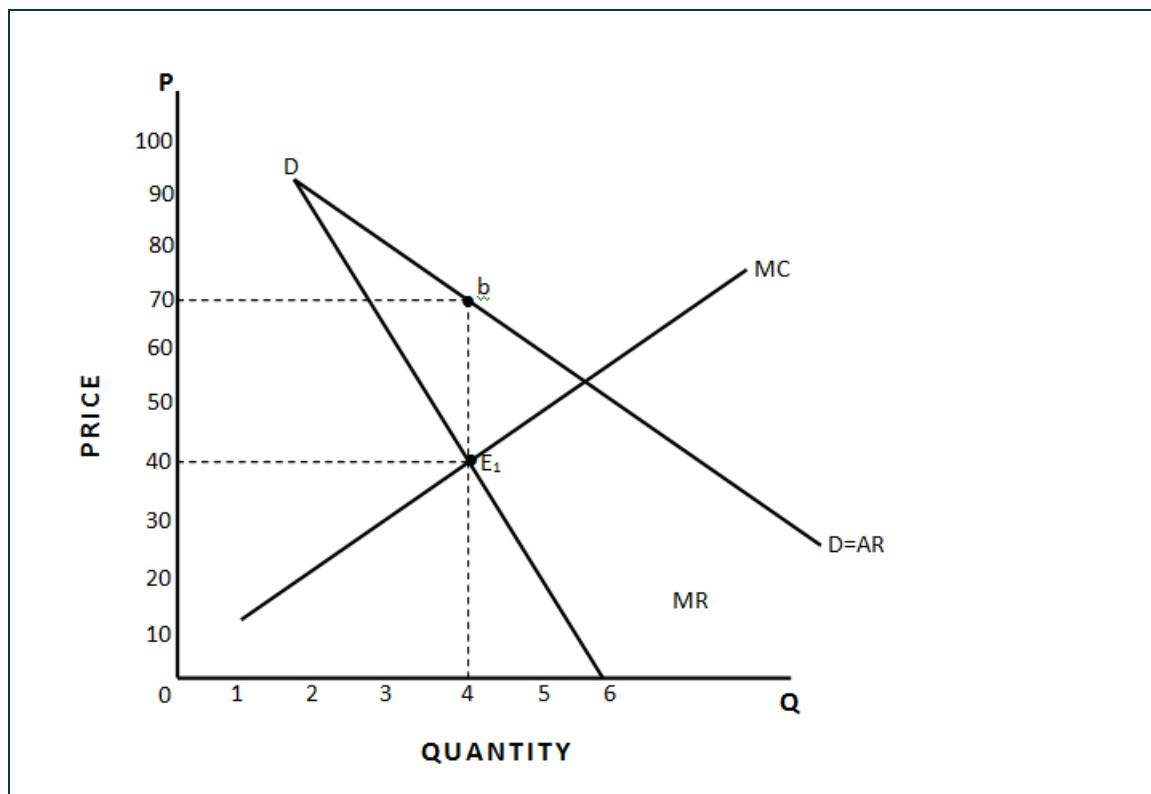
fig.1.1

- In figure$_1$, profit maximisation takes place at Q4 on the horizontal axis.
- The profit maximising point is point E$_1$ where MR and MC are equal (MR = MC)
- For quantities lower than Q4, the MR curve runs above the MC curve (MR > MC)
- This is to illustrate that the monopolist can still increase his profit by increasing output to Q4.
- He cannot produce more than Q4 because all units after Q4 are produced at a higher cost.
- Therefore, marginal cost is higher than marginal revenue (MC > MR) and the monopolist is making less profit than he/she should.

Economic profit in the short term

Step 1

First, draw your **TWO** axes: Price (vertical) and Quantity (horizontal) – remember, they meet at the origin (0).
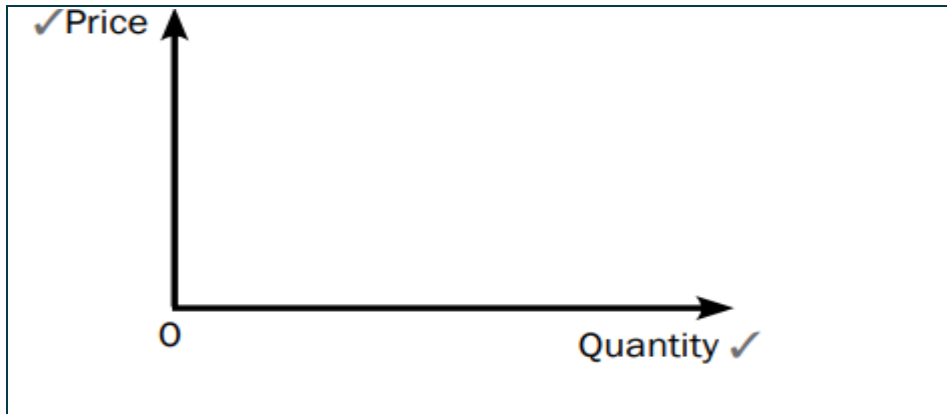
fig.1.3

Step 2

The two revenue curves start on the price axis and move down to meet the quantity axis. Draw these axes now.
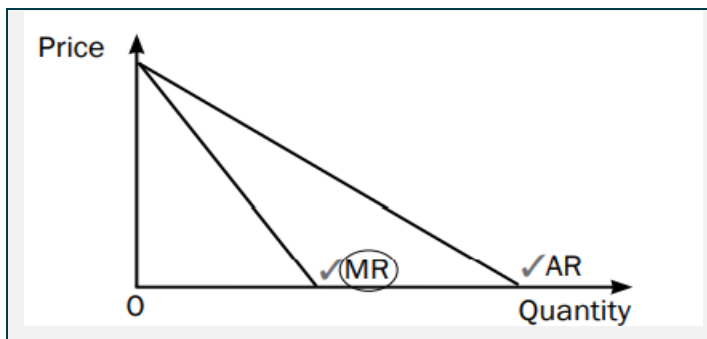
fig.1.4

Step 3

The MC curve intersects the AC curve at the minimum point of the AC curve at point e.
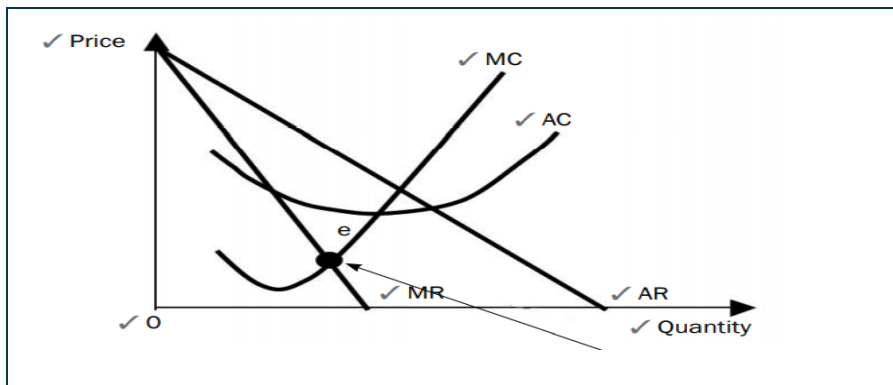
fig.1.5

Step 4

- The most important point on the graph is where MC = MR (look for the dot ●)
- At this point: equilibrium/ maximum profit/profit maximisation is reached.
- The business has expanded production to the point where the production costs of the last unit are precisely equal to the revenue that it earns.

Short-term Profit for Monopoly: Step 5

- The dot(**e**) is extended upwards to indicate the cost(**N**) and the price (**L**) and downwards to indicate quantity sold (**Q1**)
- Your cost occurs where it meets the AC curve at point N, and your market price occurs where it meets the AR curve (demand curve) at point L.
- The price that corresponds with L is indicated by P on the vertical axis.
- Remember, a monopoly company will determine the price.
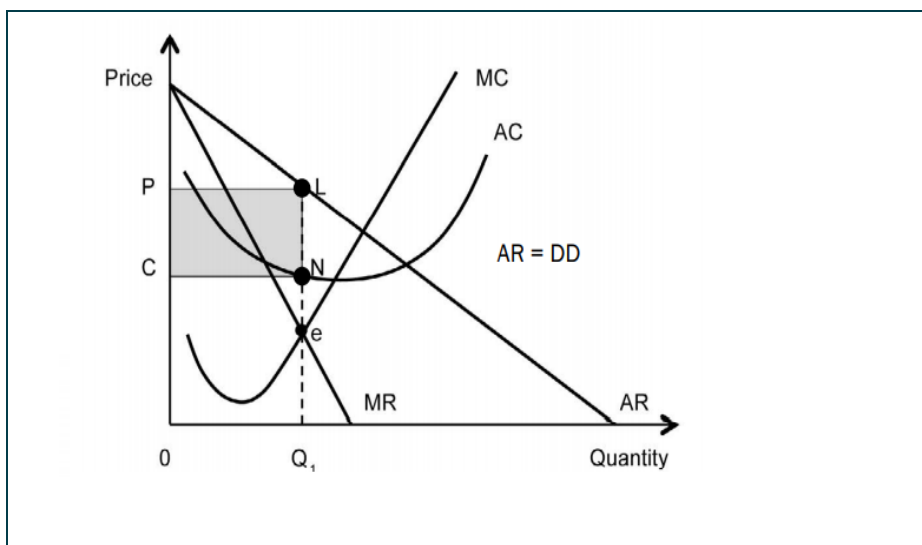
Fig 1.6

- Figure 1.6 enables us to calculate the monopolist's short-term profit.
- The monopolist's total revenue is P x Q1 which equals to 0PLQ1, and the total cost is 0CN xQ1 which equals to 0CNQ1.
- The difference between these two areas is the monopolist's total profit, which is indicated by area 0PLN.
- In diagram 1.6 since total revenue is greater than short-term total costs, the monopolist makes an *economic profit*.

Economic loss in the short term

Does the monopolist always make economic profit?

- It is possible for the monopolist to make a loss as well.
- The monopolist makes a loss if total cost (AC) is more than average revenue (AR).
- Remember, AR is the price at which the product is selling.
- Now, if the cost is more than revenue, the company will make a loss.

When you draw the economic loss for the monopolist, the graph stays the same, EXCEPT the AC curve moves to the right - up, and totally misses the AR (demand curve

Remember: To draw the economic loss, you find the market price (OP) where the dotted line meets AR. Then extend the line further to meet the AC curve – that in your cost
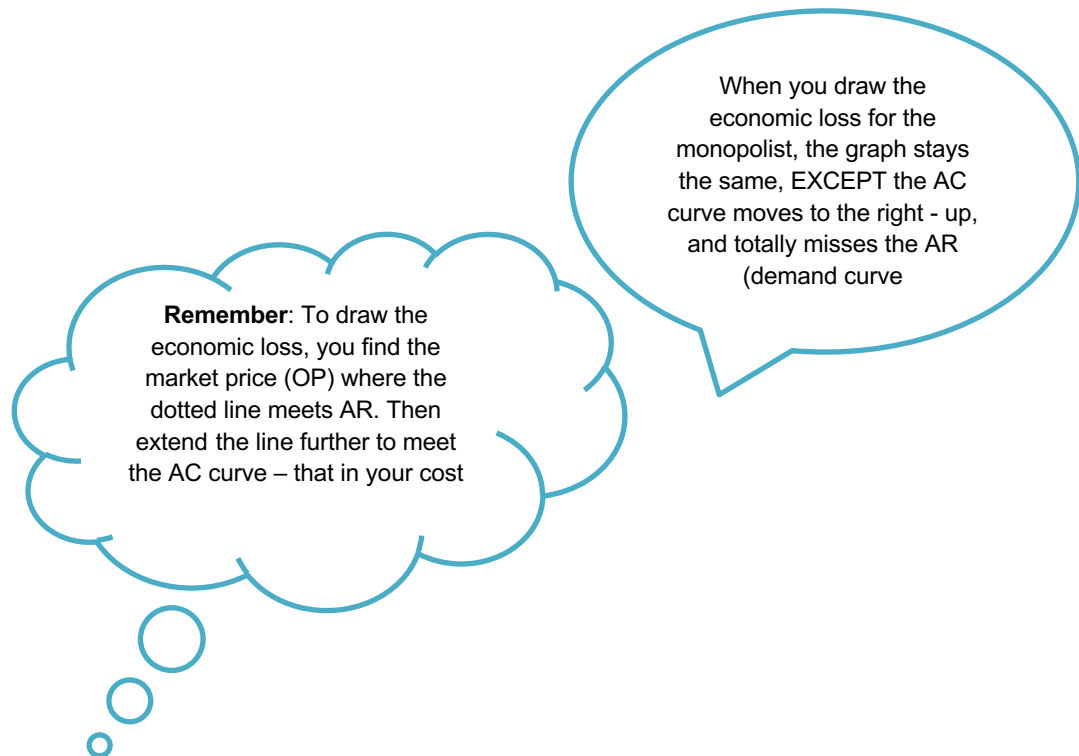
Graphical illustration for Economic Loss

Price ... AC ... MC ... C ... L ... P ... N ... e ... MR ... AR ... 0 ... Q ... Quantity ... *fig.1.7*
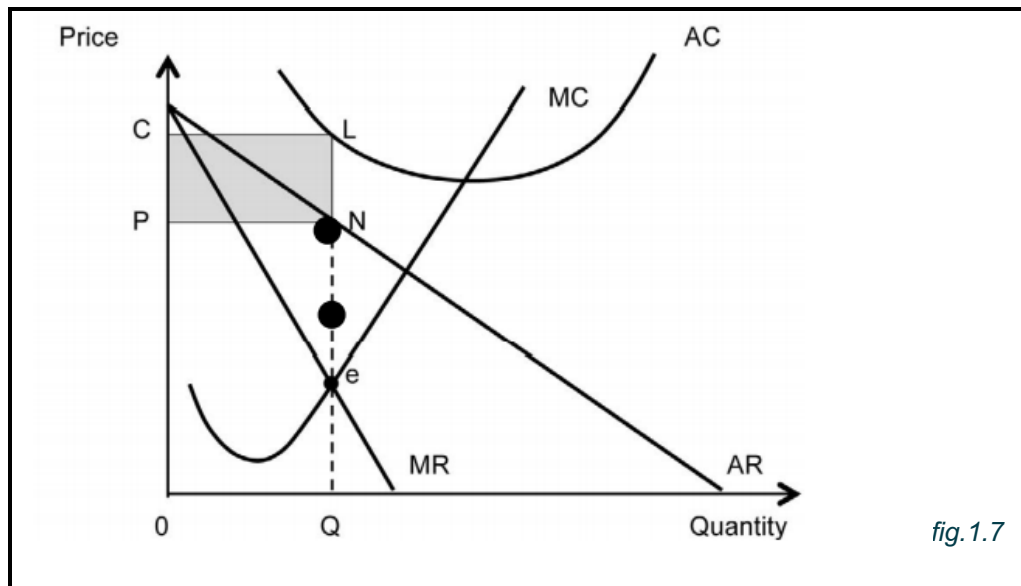
- The monopoly suffers short-term losses when the AC curve lies above the demand curve (DD).
- Equilibrium is reached where MR = MC (a loss-minimising situation).
- The monopoly will produce a quantity Q and sell at price P.
- The total costs are the area OCLQ; the total revenue is the area OPNQ.
- The loss will be that part that is shaded (the area PCLN).

Long-term equilibrium

- A firm that is making economic profit in the short run will try to sustain it even in the long-term.
- A firm that is making economic loss in the short term will try to improve its situation so that it can make economic profit in the long term.

Long-run Equilibrium of The Monopoly

LONG-RUN EQUILIBRIUM POSITION OF A MONOPOLY
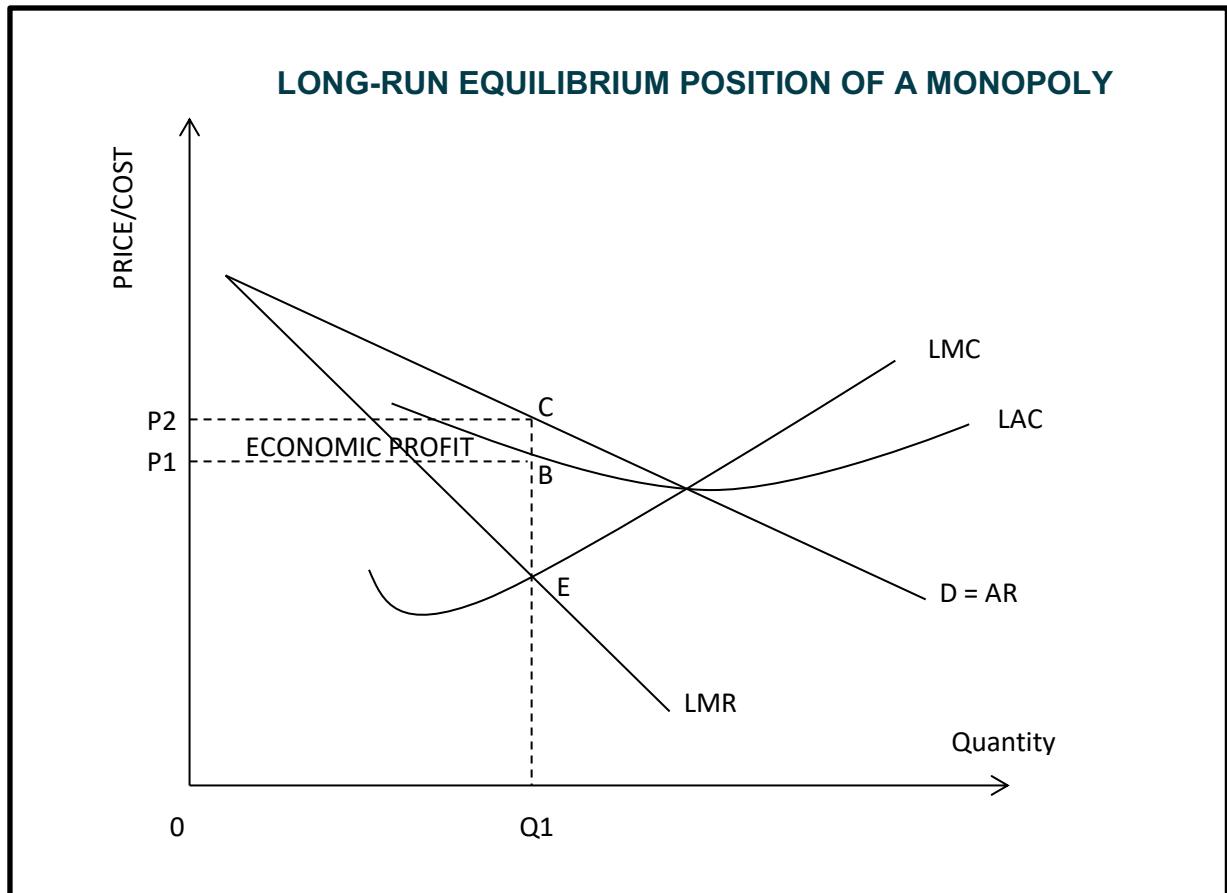
fig.1.8

- The monopolist makes economic profit even in the long term. Equilibrium in the long term is determined where LMR = LMC at point E.
- The price the monopolist charges is obtained by extending the line to point C on the demand curve, D=AR.
- Total revenue is $0P_2CQ_1$ while total cost is $0P_1BQ_1$.
- Economic profit is the difference between $0P_2CQ_1$ and $0P_1BQ_1$ which is P_1P_2CB.

Comparison Between Monopoly and Perfect Competition

	MONOPOLY	PERFECT COMPETITION
Prices	Prices are higher because a monopolist is a price-maker. Single seller in the industry and therefore easy to manipulate a price.	Prices are lower because there are many buyers and sellers. The individual is a price-taker. He has no control over price.
Output	Output is less under monopoly than under perfect competition. They keep output low so that it will not depress the price.	There is more output because there are many sellers. The output by each firm increases market output.
Competition	There is no competition since monopolist is a single supplier in the industry.	Individual firms use price competition in order to attract customers.
Profit	The monopolist makes economic profit in the short term and the long term because no new firms can enter the market.	It can make economic profit in the short term but normal profit in the long-term. The economic profit made in the short term attracts competitors to enter the market in the long run.
Demand	In the monopoly, the demand curve is downward sloping from left to right.	The demand curve for the perfect market is horizontal

.

ACTIVITIES

Activity 1.1

Give ONE term for each of the following descriptions. Write only the term next to the question number.

1.1.1   A market structure where only two businesses dominate the market.

1.1.2   A monopoly that exists because of high development costs

1.1.3   A market structure that sells unique products.

1.1.4   The output increases by more than the percentage increase in inputs which results in a decrease in cost.

1.1.5   The profit that the producer receives over and above the normal profit.

1.1.6   These are costs that cannot be retrieved if the business exits the industry.

(6 x1)

Activity 1.2

1.2.1 Study the graph below and answer the questions that follow.
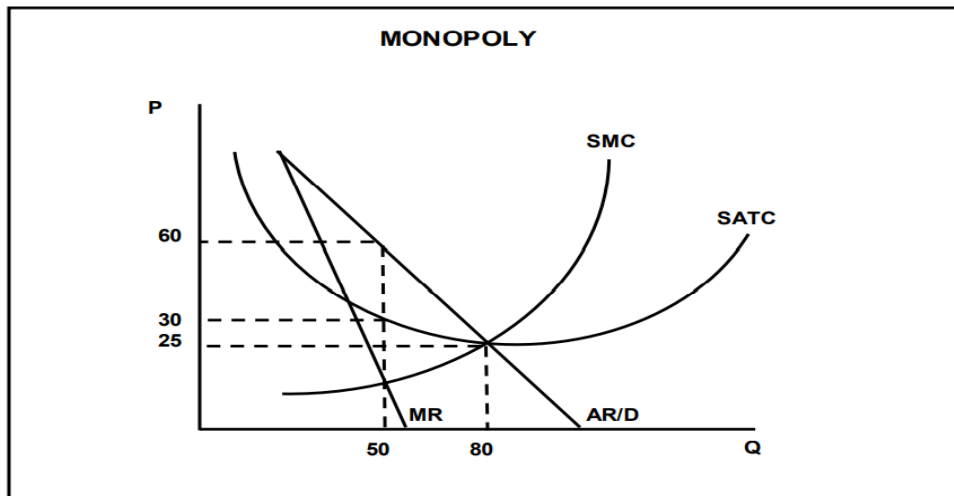
MONOPOLY

1.2.1 What is the selling price for the monopolist? (1)

1.2.2 Identify the equilibrium position for the above graph. (1)

1.2.3 Briefly describe the term *artificial monopoly.* (2)

1.2.4 Why does the marginal revenue (MR) curve lie below the demand curve? (2)

1.2.5 Calculate the total profit that this monopolist is making. Show ALL calculations.

(4)

1.3 Study the cartoon below and answer the questions that follow.

Source: google images.com

1.3.1   Which type of monopoly is shown in the above cartoon?   (1)

1.3.2   How many firms usually dominate this type of market?   (1)

1.3.3   Briefly describe the term *economies of scale.*   (2)

1.3.4   What favourable conditions may the monopolist enjoy in comparison

          to other market structures?   (2)

1.3.5   Why will this monopolist always make economic profit in the long run?   (4)

1.4   Study the extract below and answer the questions that follow.

ELECTRICITY PRICES ARE GOING UP BY 15% NEXT YEAR

Bulk electricity prices are set to increase by around 15% next year after a court victory for Eskom. But that won't necessarily reflect on home bills directly. Eskom and the National Energy Regulator of South Africa (Nersa) were battling it out in court over Nersa's decision to deduct a R69 billion equity lifeline from Eskom's allowable revenue.

The immediate result is that, in April next year; the average standard Eskom tariff approved by Nersa will go up from 116.72c/ Kwh to 128.24 c/kWh – an increase of 9.8% - as the first R23 billion is added back. This will bring the total increase to around 15%.

Adapted from *Business insider*, August 2020

1.4.1   Name the institution that is responsible for regulating price for electricity in South Africa.

(1)

1.4.2   Which type of monopoly is associated with high start- up costs?   (1)

1.4.3   Briefly describe the term *economic profit.*   (2)

1.4.4   Why would the monopolist retain economic profit in the long run?   (2)

1.4.5   How does government intervention limit entry in a monopoly?   (4)

1.5   Briefly discuss the challenges a monopolist will face if excessively high prices are charged for

the products.   (8)

1.6   How do legal requirements restrict entry in a monopoly market?   (8)

SOLUTIONS

1.1 GIVE ONE ITEM

1.1.1 Duopoly✓

1.1.2 Natural monopoly✓

1.1.3 Monopoly✓

1.1.4 Economies of scale✓

1.1.5 Economic profit✓

1.1.6 Sunk costs. ✓

1.2 DATA RESPONSE

1.2.1 What is the selling price for the monopolist?

50✓ **(1)**

1.2.2 Identify the equilibrium position for the above graph.

Short-run✓ **(1)**

1.2.3 Describe the term *artificial monopoly*.

A monopoly where the barrier to entry is not economic in nature but created,

e.g., patents. ✓✓ **(2)**

1.2.4 Why does the marginal revenue (MR) curve lie below the demand curve?

Due to the negative-sloping demand curve, every additional unit is sold at a lower price✓✓

(2)

1.2.5 Calculate the total profit that this monopolist is making. Show ALL calculations.

Total Profit = Total revenue – Total Cost

 = (60 x 50) ✓ – (30 x 50) = 3 000✓

3000 – 1 500 ✓ = 1500 ✓ OR

 Total Profit = Unit profit x quantity✓

= (60-30) ✓ x 50 ✓

 = R1 500 ✓ **(4)**

1.3   DATA RESPONSE

1.3.1   Which type of monopoly is shown in the above cartoon?

Natural monopoly✓   (1)

1.3.2   How many firms usually dominates this type of market?

One✓   (1)

1.3.3   Briefly describe the term *economies of scale.*   (2)

It occurs when inputs increase, and output increase more than the percentage increase in inputs.

1.3.4   What favourable conditions may the monopolist enjoy in comparison to other market structures?

- The monopoly is the only supplier of that product✓✓
- At liberty to set own prices / charges higher prices✓✓
- Decide on production levels / restrict its output✓✓   (2)

1.3.5   Why will this monopolist always make economic profit in the long run?

The monopolist will always make economic profit in the long run because:

- entry of other firms into the market is limited due the barriers of entry. Entry is blocked. ✓✓
- this monopolist has a patent which give him exclusive to manufacture a product. ✓✓
- monopolies normally produce less than the market demand to sell their products at higher price. ✓✓
- if the monopolist makes a loss in the short run, he can always adjust prices so that he makes an economics profit in the long run. ✓✓

(2 x 2) (4)

1.4   DATA RESPONSE

1.4.1 Name the institution that is responsible for regulating price for electricity in South Africa?.

National Energy Regulator of South Africa✓   (1)

1.4.2 Which type of monopoly is associated with high start-up costs?

Natural monopoly✓   (1)

1.4.3 Briefly describe the term *economic profit.*

Economic profit refers to the profit that is made above normal profit. ✓ ✓   (2)

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1.4.4   **Why would the monopolist retain economic profit in the long run?**

Barriers to entry limit new entrants thus maintaining profit even in the long-run/ limited competition due to restrictions makes it difficult for new firms to enter the market. ✓✓

(2)

1.4.5 **How does government intervention limit entry in a monopoly?**

By:

- Setting restrictions which make it difficult for new firms to enter the monopoly industry. ✓
- Placing hefty fees to those who want to use precious resources. ✓✓
- Protecting the strategic industry in the country, barriers are set to those trying to penetrate the market. ✓✓   (2 x 2) (4)

1.5 **Briefly discuss the challenges a monopolist will face if excessively high prices are charged for the products.**

The monopolist would not charge very high prices because:

- increasing the price might reduce the demand for the product that will reduce revenue and decrease profits✓✓
- consumers with limited budgets might switch to substitutes even though substitutes might not be close to the product of the monopolist ✓✓
- their price increases are sometimes restricted by regulatory bodies such as NERSA (price of electricity) ✓✓
- if electricity becomes too expensive, consumers can switch to gas or firewood ✓✓
- a business might close due to a persistent reduced demand and the loss of revenue ✓✓   **(8)**

1.6   **How do legal requirements restrict entry in a monopoly market?**

Patent✓This is a legal right given to the patent holder to be the sole producer of a particular product. ✓✓ A patent creates a monopoly by excluding all other firms from producing the same product✓✓

Licensing✓✓ The law requires that a firm must hold a licence in order to operate in a specific market. ✓✓ Firms that do not have a licence are prevented from entering the market✓✓. A monopoly is then created✓✓

Copyright✓ This is an exclusive right given to the author of a book or artist✓✓. It prevents other people from using his/her work without permission. ✓✓ A monopoly is then created because other people cannot use the same material✓✓

(8)

2. Oligopoly

Description

- An oligopoly consists of a small group of firms that supply the market.
- Examples of an oligopoly are cell phone service providers, the banking sector etc.
- There is limited competition because there are just few suppliers.
- When two large firms compete, the market structure is called *duopoly.*

Characteristics of an oligopoly

Number of businesses	• **There are few but large businesses e.g., Vodacom, MTN, Cell C in the cellphone industry. The Big-4-Banks of SA also form oligopoly.** • **If there are only two firms it is called the duopoly. If the firms are more than two it is called the pure oligopoly. Entry is free but not easy.**
Nature of the product	• The product may be identical or differentiated. • If the product is homogeneous the market is a **pure oligopoly,** e.g., the producers of cement and steel. • If the product is differentiated the market is called **differentiated oligopoly,** e.g., manufacturers of toothpaste, banking services, insurance companies, etc.
Freedom of entry & exit	• Entry is difficult as there are barriers of high start-up costs. • However, it is possible for other smaller firms to operate in the market of an oligopolistic market, but none of them is large enough to have any significant effect on market prices and output.
Decision making	• There is a lot of interdependence between the different firms. • The decisions taken by one firm are influenced by the decisions of other firms. • Each firm is aware of the others' actions. • If one firm introduces a new marketing strategy all the other competitors become aware and do the same. • A new advertising campaign by one firm causes others to follow suit.
Control over price	• The oligopolist has control over the price but not as much as the monopoly. • However, he must consider the reaction of other firms. • The prices charged by oligopolists are closed related. Example interest rates charged by banks are very similar. • The oligopoly is characterised by price rigidity. • Prices tend to be rigid and sticky. If any firm cuts the price, the rival firms retaliate by cutting their prices as well. • A price-cut by one competitor initiates a price-war in the oligopolistic market. • Hence under oligopoly no firm resorts to price-cutting without first consulting other firms in the market.

Non-price competition	Oligopolists do not use the price when they compete with each other. They use non-price competition strategies such as * aggressive advertising * branding * product differentiation * product loyalty * good service (e.g. after-sales services) * extended business hours (including Sundays and holidays) * door-to-door deliveries
Collusion	• Oligopolies are characterised by the act of collusion. • Since there are few firms in the industry, it is easy for them to collude. • They come together and form agreements to cooperate with each other and raise prices or restrict production to influence the price. • There are two forms of collusion – **overt collusion***(explicit collusion) and **tacit collusion*** (implicit collusion). • <u>Overt collusion</u>: This is open collusion which can be seen by everybody. • An example of overt collusion is a **cartel**. A cartel is an open agreement between firms to fix prices or to limit supply to increase profits. • The disadvantage is that cartels are unreliable. A firm can decide to cheat on others and sell at a lower price to attract buyers. • Examples of cartels are the Organisation of Petroleum Exporting Countries (OPEC) and De Beers (diamond firm in South Africa). • <u>Tacit collusion:</u> Since it is illegal to form a cartel, oligopolists may decide to collude informally. • A dominant firm in the industry is tacitly (implicitly, secretly) given a task to set the price. It takes the lead and announces the price increase. • All other firms then follow the leader and start increasing their prices as well. **NOTE**: All forms of collusion are **illegal**. Firms are not allowed to come together to fix the price.

Demand curve of the oligopolist

• Unlike in the case of perfect competition and monopoly it is impossible to determine the demand curve facing the oligopolist.

• The quantity of goods the oligopolist produces is not determined by the consumers' demand only.

• The oligopolist must also consider the actions of other producers. One theory that can be used to determine the oligopolist's demand curve is what is called the **kinked demand curve**.

• According to this theory firms in an oligopoly are striving to protect and maintain their market share.

Kinked demand curve.
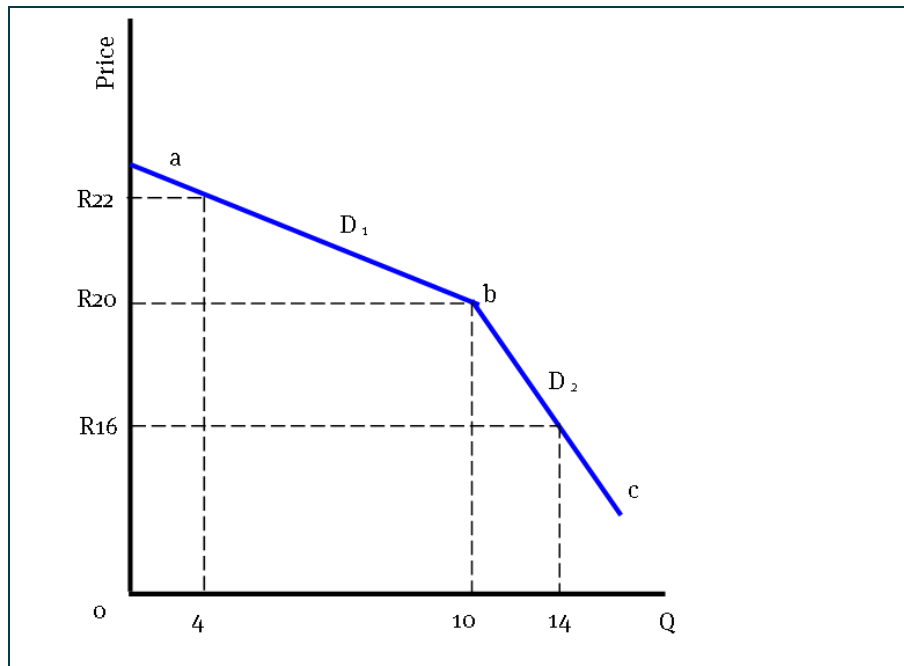
Fig.1.8

- A kinked demand consists of **two** sections.
- The top section (D_1) is relatively **elastic,** and the bottom part (D_2) is highly **inelastic**.
  Suppose the market price is R20:
- At this price 10 units are produced and sold. Total revenue is R20 x 10 = R200.
- If the firm tries to increase its profit by increasing the price by R2 to R22 it faces the risk that the quantity demanded will fall from 10 units to 4 units.
- Total revenue will fall to R88.
- A small change in price causes a huge change in quantity.
- Other oligopolists in the industry will not follow his lead.
- Therefore, the upper segment of the demand curve (D_1) shows that rivals will ignore price increases but match price cuts.
- The firm that increases the price will lose its customers to those that did not increase the price.
- The firm can also try to increase its profit by reducing the price and thereby increase its total sales.
- If the price is reduced by R4 from R20 to R16, demand increases only by 4 units from 10 to 14 units.
- Demand is relatively inelastic however there is a small increase in revenue to R224.

Comparison between the oligopoly and perfect competition

	OLIGOPOLY	PERFECT COMPETITION
Prices	Prices are higher because the oligopolist is a price-maker. There are few firms in the industry. It is easy for them to come together and fix a higher price.	Prices are lower because there are many buyers and sellers. The individual is a price-taker. He has no control over price.
Output	Output is less under oligopoly than under perfect competition. They keep output low so that it will not depress the price.	There is more output because there are many sellers. The output by each firm increases market output.
Competition	It uses non-price competition strategies such as advertising and product differentiation to increase profit	Individual firms use price competition in order to attract customers.
Profit	The oligopoly makes economic profit in the short term and the long term because it is difficult for new firms to enter the market.	It can make economic profit in the short term but normal profit in the long-term. The economic profit made in the short term attracts competitors to enter the market in the long run.
Demand	The demand in the oligopoly market cannot be ascertained because it is affected by the reaction of other firms. As a result, the kinked-demand curve shows the reaction of other firms when the price changes.	The demand curve is downward sloping from left to right.

Activities

Activity 2

Give ONE term for each of the following descriptions. Write only the term next to the question number (2.1.1–2.1.4) in the ANSWER BOOK. NO abbreviations or acronyms will be accepted.

2.1.1   A market where actions of one firm also affect other firms. (1)

2.1.2   An agreement between firms to fix prices. (1)

2.1.3   A demand curve that has two market segments. (1)

2.1.4   A situation where a dominant firm fixes the price and smaller ones accept is as a market
price. (1)

(4x1) (4)

2.2 **Answer the following questions.**

2.2.1 Give TWO types of collusion. (2x1) (2)

2.2.2 Why is it difficult for new firms to enter an oligopoly market? (1x 2) (2)

2.3 Study the cartoon below and answer the questions that follow.

Source: googleimages.com

2.3.1 Which market structure is shown by the above cartoon? (1)

2.3.2 What is the nature of the product sold in the above market? (1)

2.3.3 Briefly describe the term *product differentiation*. (2)

2.2.4 Why are businesses in this market structure interdependent (2)

2.2.5 How does control over price differ in oligopoly compared to perfect market? (4)

2.4 Study the graph below and answer the questions that follow.
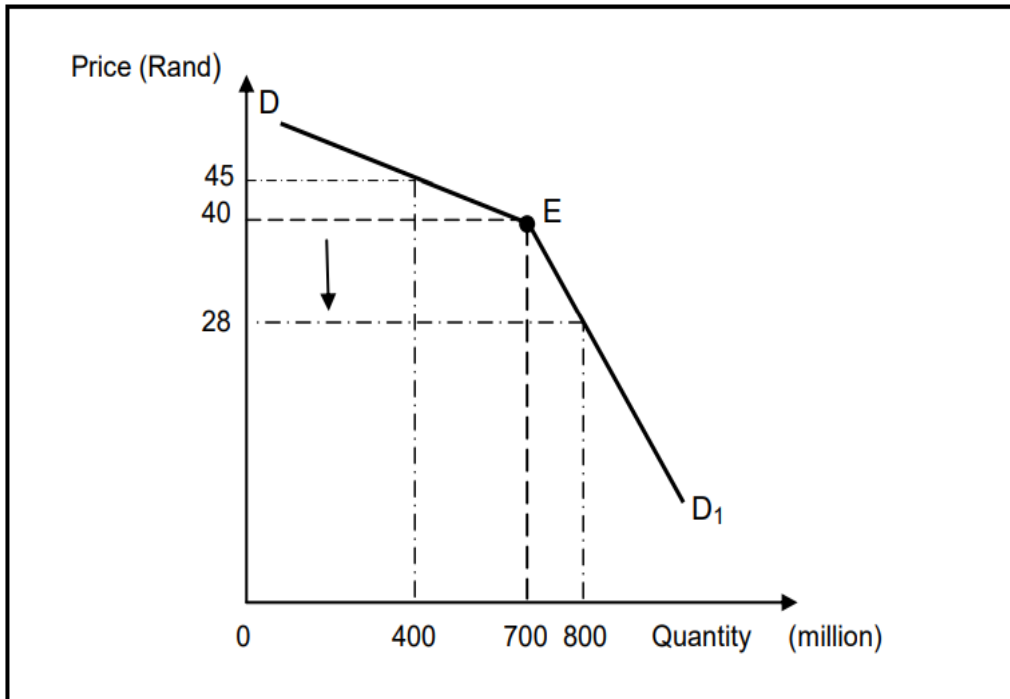
2.4.1 Identify the inelastic segment of the demand curve. (1)

2.4.2 Name the demand curve above. (1)

2.4.3 Briefly describe the term *tacit collusion.* (2)

2.4.4 How does the profit of an oligopoly differ from the profit of a monopolistic competitor in the long run? (2)

2.4.5 Why will the producer be reluctant to decrease the price from R40,00 to R28,00? Show ALL calculations. (2 x 2) (4)

2.5 Study the extract below and answer the questions that follow.

BANKING CARTEL HITS SOUTH AFRICAN RAND HARD

Three South African banks have been implicated in 'widespread' collusion relating to
the price-fixing of the rand. It has been alleged that currency traders have been buying and
selling US dollars in exchange for the rand at fixed prices.
This was accomplished by making false sales to drive up demand or colluding to agree not to
trade for specific periods of time.
These trade practices have resulted in the depreciation of the rand. It consequently affected
South Africa's import and export trade directly

Source: Adapted from Sunday times2019

2.5.1   What kind of market structure does the extract refer to?   (1)

2.5.2   Which strategy is used by banks to attract more customers in their business?   (1)

2.5.3   Briefly describe the term *Cartel*.   (2)

2.5.4   What is the position of the competition policy on the formation of cartels.   (2)

2.5.5   How would cartels in the banking sector affect South Africa's foreign trade?   (4)

2.6   Briefly discuss *nature of product* and *market entry* under oligopoly.   (8)

2.7   Evaluate the impact of collusion in the economy.   (8)

Solutions

 2.1   **GIVE ONE ITEM**

         2.1.1   Oligopoly✓

         2.1.2   Collusion✓

         2.1.3   Kinked demand curve✓

         2.1.4   Price Leadership✓

2.2 **Answer the following questions.**

2.2.1 **Give TWO types of collusion.**

Tacit✓ and overt collusion✓

(2x1) (2)

2.2.2 **Why is it difficult for new firms to enter an oligopoly market?**

- High start-up capital required/existing firms may use aggressive marketing which is expensive✓✓.
- Difficult to compete with established existing brands due to high advertising costs. ✓✓

(1x 2) (2)

2.3 **DATA RESPONSE**

2.3.1 **Which market structure is shown by the above cartoon?**

Oligopoly✓ (1)

2.3.2 **What is the nature of the product sold in the above market?**

Differentiated✓ (1)

2.3.3 **Briefly describe the term *product differentiation.***

Product differentiation is a strategy used by firms to distinguish a product or service from other ones available in the market. ✓✓ (2)

2.2.4 **Why are businesses in this market structure interdependent?**

It is because there are a few sellers dominate the market, therefore each seller is influenced by the action of the other sellers. ✓✓ (2)

2.2.5 **How does control over price differ in oligopoly compared to perfect market ?**

- In oligopoly firms are price-makers but their control over prices is limited by the kinked demand curve which they face. ✓✓
- In perfect competition individual businesses are price-takers; each business is too small to influence the price. ✓✓
- Prices in perfect markets are determined by the industry through the interaction of demand and supply. ✓✓ (2 x2)(4)

2.4 DATA RESPONSE

2.4.1 **Identify the inelastic segment of the demand curve**

ED_1✓ (1)

2.4.2 **Name the demand curve above.**
Kinked demand curve ✓ (1)

2.4.3 **Briefly describe the term *tacit collusion.***

It occurs where firms make informal agreement to charge prices established by a dominant
    firm. ✓ (2)

2.4.4 **How does the profit of an oligopoly differ from the profit of a monopolistic competitor
in the long run?** (2)
- The oligopoly makes economic profit in the long term because it is difficult for new
  firms to enter the market. ✓✓
- However, monopolist competitor makes normal profit in the long run as it is easy to
  enter the market. ✓✓ (2)

2.4.5 **Why will the producer be reluctant to decrease the price from R40,00 to R28,00? Show
ALL correct calculations.**

The producer revenue will decrease. ✓✓At a price of R40,00 the producer will earn
R28000 (40 x 70) ✓✓compared to an income of R22 400 (28 x800) at a price of R28.

OR

By reducing the price, the firm will operate on the inelastic part of the demand curve.

The percentage increase in the market share will be less than the percentage decrease in price.

% decrease $=\frac{12}{40} \times 100= 30\%$✓✓

% increase in market share$=\frac{100}{700} \times 100) = 14.3\%$✓✓ (2 x 2) (4)

2.5 DATA RESPONSE

2.5.1 **What kind of market structure does the extract refer to?**

Oligopoly✓ (1)

2.5.2 **Which strategy is used by banks to attract more customers in their business?**
Advertising✓ (1)

2.5.3 **Briefly describe the term *Cartel*.**

A group of businesses in an oligopoly that comes together with the aim of fixing prices✓✓

(2)

2.5.4 **What is the position of the competition policy on the formation of cartels.**

South Africa does not approve because it is a form of collusion which is illegal and punishable by law in terms the Competitions Act. ✓✓ (2)

2.5.5 **How would cartels in the banking sector affect South Africa's foreign trade?** South Africa's foreign trade will be affected by:

- Exports increase due to the depreciation / weakening of the exchange rate ✓✓
- Exports will decrease if the rand appreciates / strengthening of the exchange rate✓✓
- Imports increasing due to the appreciation of the rand / strengthening of the exchange rate✓✓
- Imports decreasing due to the depreciation of the rand / weakening of the exchange rate✓✓

(2x2) (4)

2.6 Briefly discuss *nature of product* and *market entry* under oligopoly.

Nature of product

- Businesses in oligopoly sell homogenous and/or differentiated products. ✓✓
- Oligopolies that sell homogenous products are called pure oligopoly. ✓✓
- Oligopolies that sell differentiated products are called differentiated oligopoly. ✓✓

(2x2) (4)

Market entry

- Entry into oligopoly market is difficult because there are barriers to entry such as economies of scales and access to expensive and complex technology. ✓✓
- Collusion by oligopolies is another barrier to entry which stops new entrants from entering an oligopoly market.   ✓✓   (8)

(2x2) (4)

2.7   **Evaluate the impact of collusion in the economy.**

Collusion will impact the economy negatively by:

- reducing competitiveness in the long run by decreasing GDP and employment ✓✓
- allowing price fixing, market sharing and output control by cartels and price leadership ✓✓
- creating scarcity to increase prices while also protecting inefficient suppliers
- forcing community, consumers, businesses and even governments to pay higher prices for goods and services. ✓✓
- distorting economic markets and slowing down innovation because there is little incentive to spend money on research and development. ✓✓

Collusion will impact the economy positively by:

- benefiting the supplier by logically fixing prices✓✓
- benefiting third parties e.g. OPEC (oil cartel) and Greenpeace actually have similar interests - OPEC artificially increase the price of oil through collusion. ✓✓
- This reduces quantity consumed. This decreases the "number" of negative externalities of pollution✓✓
- benefiting the government through increased revenue via indirect taxes on inflationary price ✓ ✓ (8)

2   **Monopolistic Competition**
Description

- The firm operates in a market structure where there are many buyers and sellers.
- Some firms can make their product slightly different to the competitors through a process of product differentiation.
- Restaurants are good examples of monopolistic competition.

Characteristics of a Monopolistic Competition

	MONOPOLISTIC COMPETITION
Prices	The firm has little control over price
Output	There is more output because there are many sellers. The output by each firm increases market output.
Competition	Differentiated products create opportunities for non-price competition e.g. advertising.
Profit	It can make economic profit in the short term but normal profit in the long-term. The economic profit made in the short term attracts competitors to enter the market in the long run.
Demand	The demand curve is downward sloping from left to right.
Nature of a Product	The products are differentiated. Products are similar but not identical. They are similar in that they satisfy the same need of the consumer. There may be differences in packaging, but the product is the same
Entry	Entry into the market is easy.
	Monopolistic competition displays a **hybrid structure**. It is a combination of competition and a monopoly.
Information	Information for buyers and sellers is incomplete.
Collusion	Collusion is not possible under monopolistic competition

Non-price competition

- Monopolistic market, competition is not based on prices but rather on factors relating to the product's uniqueness.

- They make use of non-price measures to attract customers and increase their market share.

- An important aspect of non-price competition is to build brand loyalty, product recognition and product differentiation.

Types of non-price competition:

Product differentiation	**Refers to similar products that satisfy the same consumer need and can be used interchangeably, e.g., beauty products, toothpaste, shoes, etc.**
Advertising	- used by businesses to make consumers believe that their products are different and better than competing products. - Advertising can help to establish brand loyalty, e.g., consumers may be loyal to Adidas sneakers and make it their personal identity.
Loyalty Schemes	where consumers are encouraged by businesses to shop at their stores by signing up for loyalty cards, e.g., clicks, pick and pay etc.

.

3.3.1 Determination of prices and output in the short run

- As with the other market structures, profits are maximised at the output where MC = MR.
- The diagram is the same as for the monopolist, except that the demand curve (D/AR) and MR curve are very elastic.
- As with perfect competition, it is possible for the monopolistically competitive firm to make economic profit in the short run. This is illustrated by fig.1.9
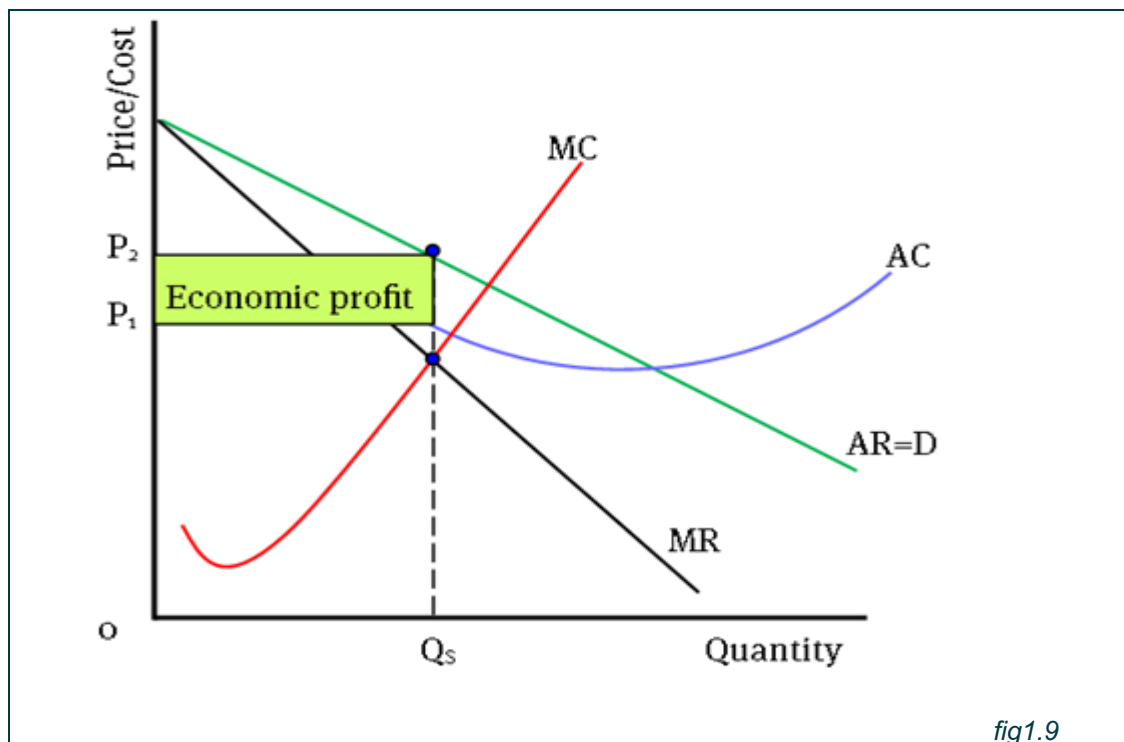
fig1.9

Determination of prices and output in the long run

- Fig.1.9 depicts the equilibrium position of a monopolistic competition in the long run.
- If a firm earns economic profit in the short-term, it attracts new firms and new firms will take customers away from established firms.
- New entrants reduce economic profit earned in a short-run and is no further incentive for new firms to enter.
- The market goes back to earning normal profit and Long-run equilibrium is reached.
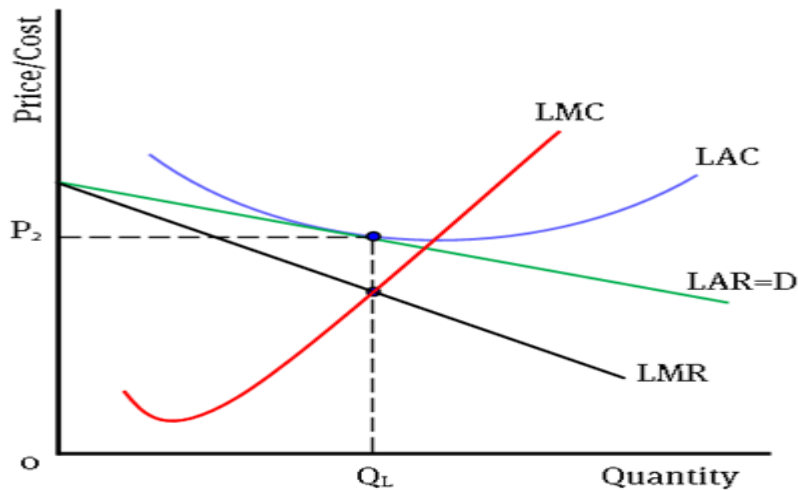
fig.1.10

- In fig.1.10 equilibrium occurs at point *a* where LAR is tangent to LAC.

- Output will be Q_L – where LAR = LAC. At any other output, LAC is greater than LAR and thus less than normal profit would be made.

Activity 3

3.1   Give ONE term for each of the following descriptions. Write only the term next to the question number (3.1.1–3.1.4) in the ANSWER BOOK. NO abbreviations or acronyms will be accepted.

3.1.1   A market structure that is a combination of perfect market and Monopoly.

3.1.2   A period in which at least one factor of production is fixed

3.1.3   Products that are similar in nature

3.1.4   The cost that remains the same even if the output changes

3.2   Study the Picture below and answer the questions that follow.

Source: googleimages.com

3.2.1   What influences the consumer to choose one sneaker over the other?   (1)

3.2.2   Give one example of monopolistic competition industry.   (1)

3.2.3   Briefly describe the term *normal profit.*   (2)

3.2.4   Why is the demand curve of a monopolistic competitor more elastic than that of a monopoly?
                                                                                              (2)

3.2.5   How does branding play a key role in a monopolistic competitive market structure?
(2x2) (4)

3.3 Study the graph below and answer the questions that follow.

SOUTH AFRICA'S FAST-FOOD MARKET BY PRODUCT TYPE
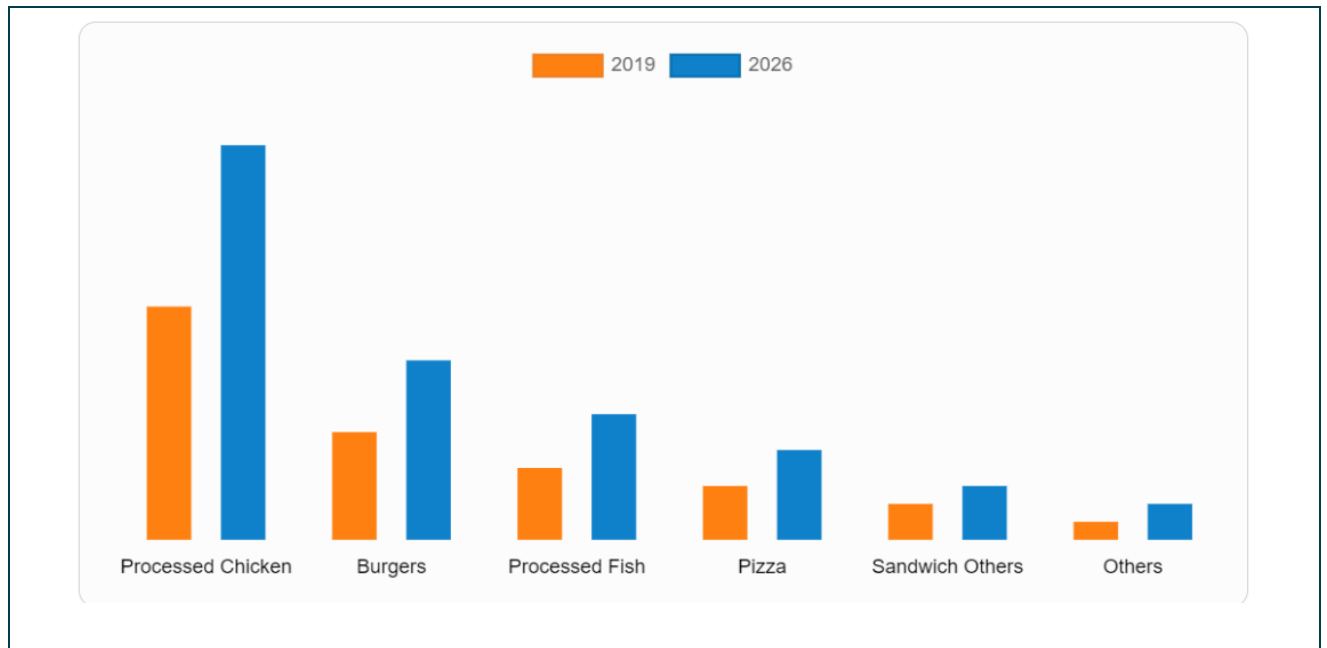
Source: Adapted from Business times

3.3.1 Name the market depicted by the above graph? (1)

3.3.2 Which fast -food product will continue to dominate the industry until 2026. (1)

3.3.3 Briefly describe the term *marginal revenue.* (2)

3.3.4 Briefly explain the reason why businesses in the monopolistic competitive market prefer to compete on a non-price basis. (2)

3.3.5 Why will the economic profit made by a monopolistic competitor disappear in the long run? (2x2) (4)

3.4 Explain, with the aid of a correctly labelled graph, why the oligopolist will not compete on price to increase his/her market share. (8)

3.5 How may differentiated products influence consumers and producers in a monopolistic competitive market? (8)

SOLUTIONS

3.1   One Item

3.1.1   Monopolistic Competition✓

3.1.2   Short run✓

3.1.3   Identical✓

3.1.4   Fixed✓

3.2 DATA RESPONSE

3.2.1   **What influences the consumer to choose one sneaker over the other?**

Brand loyalty/advertising✓   (1)

3.2.2   **Give one example of monopolistic industry.**
Retail, Food, etc✓   (1)

3.2.3   **Briefly describe the term normal profit.**

It is a profit that is sufficient to ensure the entrepreneur continues production/minimum earnings required to prevent the entrepreneur from leaving and using his/her production factors elsewhere.   ✓✓   (2)

3.2.4   **Why is the demand curve of a monopolistic competitor more elastic than that of a monopoly?**   (2)

The products of a monopolistic competitor are good substitutes unlike a monopolist where the there are no close substitutes. ✓✓   (2)

3.2.5   **How does branding play a key role in a monopolistic competitive market structure?**

Branding plays a key role in monopolistic competitive markets by:

- each business selling a slightly differentiated product. ✓✓
- it is based on the opinion of consumers✓✓
- building customer loyalty where a consumer will choose one producer over another. ✓✓   (2x2) (4)

3.3 DATA RESPONSE

3.3.1 **Which market is depicted by the above graph?**

Monopolist competition✓ (1)

3.3.2 **Identify the fast -food product will continue to dominate the industry until 2026.**

Processed Chicken ✓ (1)

3.3.3 **Briefly describe the term *marginal revenue.***

The extra revenue the seller earns when it produces and sells one more unit of the product. ✓✓ (2)

3.3.4 **Briefly explain the reason for businesses in the monopolistic competitive market prefer to compete on a non-price basis.**

- Non-price competition allows them to focus on the uniqueness of the product which can increase sales ✓✓
- They do not compete based on price because it can drive prices down due to many sellers ✓✓

(2)

3.3.5 **Why will the economic profit made by a monopolistic competitor disappear in the long run?**

Economic profit will disappear in the long run because:
- profits attract new businesses easily into the market making it more competitive ✓✓
- increased competition will lead to a decrease in prices which will reduce profits ✓✓
- there can be an increase in the number of substitute products produced which will reduce the demand ✓✓
- this will eventually lead to normal profit by the monopolistic competitor in the
  long-run ✓✓ (2x2) (4)

3.4   **Explain, with the aid of a correctly labelled graph, why the oligopolist will not compete on price to increase his/her market share.** (8)
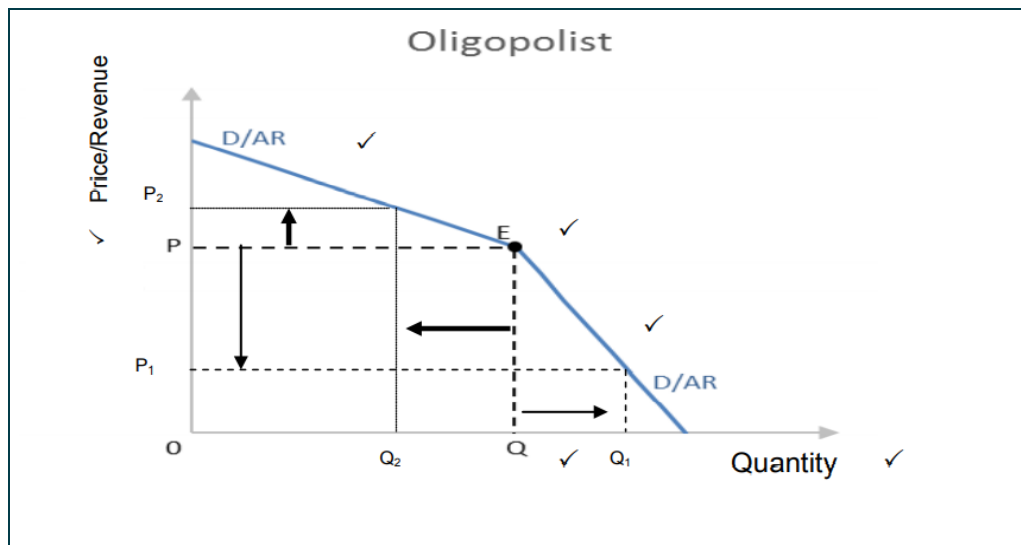
- As an oligopolist raises its price above point E, it will lose customers because the other oligopolists will not raise their price. ✓✓

- Although he will benefit from the increased revenue per unit, his total revenue will be lower because of a greater loss of customers. ✓✓

- If an oligopolist lowers its price below point E, other oligopolists will lower their price to compete, and as a result, the decrease in price does not attract many new customers. ✓✓

- Because raising or lowering the price is not beneficial for the oligopolist, it engages in mostly non-price competition such as product differentiation and efficient service underscored by advertising. ✓✓

3.5   **How may differentiated products influence consumers and producers in a monopolistic competitive market?** (8)

Consumer

- The consumer may regard one product as better, whether real or imagined, Therefore, it is based on the opinion of consumers✓✓

- Consumers tend to buy brand names and have their preferences in this regard ✓✓ E.g. Levi jeans will be more popular than no name brand jeans. ✓

- Increase spending due to consumers wanting different brands of the same good, e.g. Nike, Puma, etc✓✓ (Max 4)

Producers

- By selling slightly differentiated product each producer distinguishes themselves from another producer. ✓✓

- The unique characteristics of differentiated products allow producers to compete against others. ✓✓

- Therefore, they can justify a higher price for their product based on these 'uniqueness' (slight differentiation) ✓✓(Max 4)

(Max4) (2 x 4) (8)

4.2 SUMMATIVE ASSESSMENT

SECTION A (COMPULSORY)

Question 1

Various options are provided as possible answers to the following questions. Choose the answer and write only the letter (A–D) next to the question number (1.1.1–1.1.6) in the ANSWER BOOK, for example 1.1.9 D.

1.1.1 A monopolist will maximise his revenue where his marginal revenue is equal to

A one

B marginal cost.

C zero.

D the market price.

1.1.2 Products of a monopolistic market are …

A differentiated.

B homogeneous.

C unique.

D identical.

1.1.3 Advertising and branding play a key role in a/an … market

A monopoly

B formal

C oligopoly

D monopolistic competitive

1.1.4   An industry with only two producers controlling the market is known as a/an …

   A   duopoly

   B   monopoly.

   C   oligopoly.

   D   triopoly

1.1.5   The gap between the average cost (AC) curve and the average variable cost (AVC) curve …
         as production increases.

   A   increases

   B   stays the same

   C   expands

   D   decreases

1.2   Choose a description from COLUMN B that matches the item in COLUMN A. Write only the
letter (A–I) next to the question number (1.2.1–1.2.5) in the ANSWER BOOK.

COLUMN A	COLUMN B
1.2.1 Marginal Cost	A. method of building customer loyalty by choosing one product instead of another
1.2.2 Patent	B. total revenue is equal to average costs
1.2.3 Branding	C. the additional cost when producing an extra unit
1.2.4 Price leadership	D. exclusive right to manufacture a product
1.2.5 Break-even point	E. an example of tacit collusion in an oligopoly market with regard to pricing
	F. total revenue is equal to total cost

SECTION C

Your answer will be assessed as follows:

STRUCTURE OF ESSAY	MARK ALLOCATION
Introduction The introduction is a lower-order response. • A good starting point would be to define the main concept related to the question topic. • Do NOT include any part of the question in your introduction. • Do NOT repeat any part of the introduction in the body. • Avoid mentioning in the introduction what you are going to discuss in the body.	Max. 2
Body **Main part:** Discuss in detail/In-depth discussion/Examine/Critically discuss/ Compare/Distinguish/Differentiate/Explain/Asses/Debate/Draw a graph and explain/Use the graph given and explain/Complete the given graph **Additional part:** Give own opinion/Critically discuss/Evaluate/Critically evaluate/ Deduce/Compare/Distinguish/Interpret/Briefly debate/How/Suggest/Analyse	Max. 26 Max. 10
Conclusion Any higher-order conclusion should include: • A brief summary of what has been discussed without repeating facts already mentioned • Any opinion or value judgement on the facts discussed • Additional support information to strengthen the discussion/analysis • A contradictory viewpoint with motivation, if required • Recommendations	Max. 2
TOTAL	**40**

QUESTION 2: MICROECONOMICS   **40 MARKS – 40 MINUTES**

- Discuss in detail an oligopoly as a market structure.   (26 marks)
- Evaluate the impact of imperfect competition on consumers.   (10 marks)

QUESTION 3   MICROECONOMICS   **40 MARKS – 40 MINUTES**

- With the aid of graphs, discuss how economic profit and economic loss is determined in a monopoly market.   (26 marks)
- Why does the performance of natural monopolies contradict (deny) the long-run equilibrium position of a monopoly?   (10 marks)

QUESTION 4 MICROECONOMICS   **40 MARKS – 40 MINUTES**

- Compare the market structure of a monopolistic competitor to that of a perfect market.
  (26 marks)
- Explain, with the aid of a graph, how economic profit is achieved for a perfect competitor.
  (10marks)

4.2 SOLUTIONS TO FORMATIVE ASSESSMENT

QUESTION 1

1.1 MULTIPLE-CHOICE QUESTIONS

    1.1.1   B   Marginal Cost✓✓

    1.1.2   A   differentiated✓✓

    1.2.3   C   oligopoly✓✓

    1.2.4   A   duopoly✓✓

1.2 MATCHING ITEMS

1.2.1   C   the additional cost when producing an extra unit✓

1.2.2   D   exclusive right to manufacture a product✓

1.2.3   A   method of building customer loyalty by choosing one product instead of another✓

1.2.4   E   an example of tacit collusion in an oligopoly market with regard to pricing✓

1.2.5   F   total revenue is equal to total cost✓

QUESTION 2

INTRODUCTION

The oligopoly is a type of imperfect market in which only a few producers dominate the market ✓✓
(Max 2)

MAIN PART

Nature of the product✓

- The product may be homogeneous (the same) or differentiated (heterogeneous) – slight differences✓✓
- If the product is homogeneous, it is known as a pure oligopoly✓✓
- If it is differentiated, it is known as a differentiated oligopoly✓✓

Market information ✓

- There is incomplete information ✓✓

Market entry ✓

- Entry is easy to difficult; it is limited in the sense that huge capital outlay might be necessary ✓✓

Control over price ✓

- Considerable control over price, it can influence price, but not as much as the monopolist ✓✓
- Oligopolies can frequently change their prices to increase their market share and this can result in price wars ✓✓

Mutual dependence ✓

- Mutual dependence (interdependence) exists amongst these businesses ✓✓
- Each firm knows its market share, the behaviour of one firm can influence other significantly ✓✓
- A change in the price or change in the market share by one firm is reflected in the sales of the others ✓✓

Non-price competition✓

- Because price competition can result in destructive price wars, oligopolists prefer to compete on a different basis ✓✓
- This encourages non-price competition through advertising, packaging, after-sales services ✓✓
- Participants observe one another carefully – when one oligopolist launches an advertising campaign, its competitors soon follow suit ✓✓
- If oligopolies operate as a cartel, firms have an absolute cost advantage over the rest of the other competitors in the industry ✓✓

Collusion ✓

- Overt collusion: ✓ Firms can work together to form a cartel; a cartel is a formal agreement amongst firms to work together in limiting total industry supply to increase prices or fix prices at certain levels ✓✓
- The main idea is to increase individuals' members' profits by reducing competition. ✓✓
- This is illegal and often investigated by the Competition Commission in South Africa ✓✓
- Guilty businesses are often heavily penalized in the form of fines ✓✓
- *Tacit collusion*: ✓

- The oligopoly market may be characterised by a definite price leader, other may follow the pricing policy of the leader ✓✓
- This is not a formal agreement and thus not illegal in South Africa. ✓✓ Examples in South Africa are cell phone operators: Cell C, MTN, Vodacom, Telkom Mobile, petrol garages like Engen, Total, Caltex, Shell, BP; Banks like FNB, ABSA, Standard Bank, Nedbank, Capitec ✓✓ Limited competition
- There are only a few suppliers manufacturing the same product✓✓

Economic profit ✓

- Oligopolies can make an economic profit over the long term ✓✓
- Abnormal profits may a result of joint decision-making in an oligopoly ✓✓

The demand curve✓

- slopes from left to right (downward sloping) ✓✓
- Also known as die kinked demand-curve ✓✓
- Contains two curves (elastic and inelastic parts) ✓✓

Productive/Technological efficiency ✓

- Productive efficiency is possible✓✓

Allocative efficiency ✓

- Allocative efficiency is not possible

ADDITIONAL PART

Negative impact

- Most businesses operating in imperfect markets maximise profits by supplying less than the optimal quantity of goods or services produced which means that some <u>consumers needs may not be met</u> ✓✓
- Reduced quantities lead to <u>higher prices which may exclude lower income</u> groups ✓✓
- New businesses are sometimes prevented from entering the industry, thereby limiting competition, which <u>prevents consumers from enjoying lower prices and a variety of goods</u> ✓✓
- Collusion which is rife in oligopoly markets results in higher prices which at times <u>prevent some consumers to afford the product</u> ✓✓

- <u>Consumers pay higher prices</u> in the imperfect markets due to the fact that production does not take place at the lowest point of the LAC-curve ✓✓

<u>Positive impact</u>

- Imperfect markets can stabilise supply or output of certain goods and services, that requires a vast amount of input capital, ensuring a <u>variety of goods available to consumers</u> ✓✓
- Imperfect markets can also provide a <u>better-quality product</u> to the consumer; large corporations have Research and Development units that constantly develop new technology and improved production methods ✓✓
- Patent rights give the patent holder e<u>xclusive rights t</u>o produce a product; this stimulate innovations and inventions (new products) that could be beneficial to consumers ✓✓

(A maximum of 2 marks may be allocated for mere listing of facts / examples)
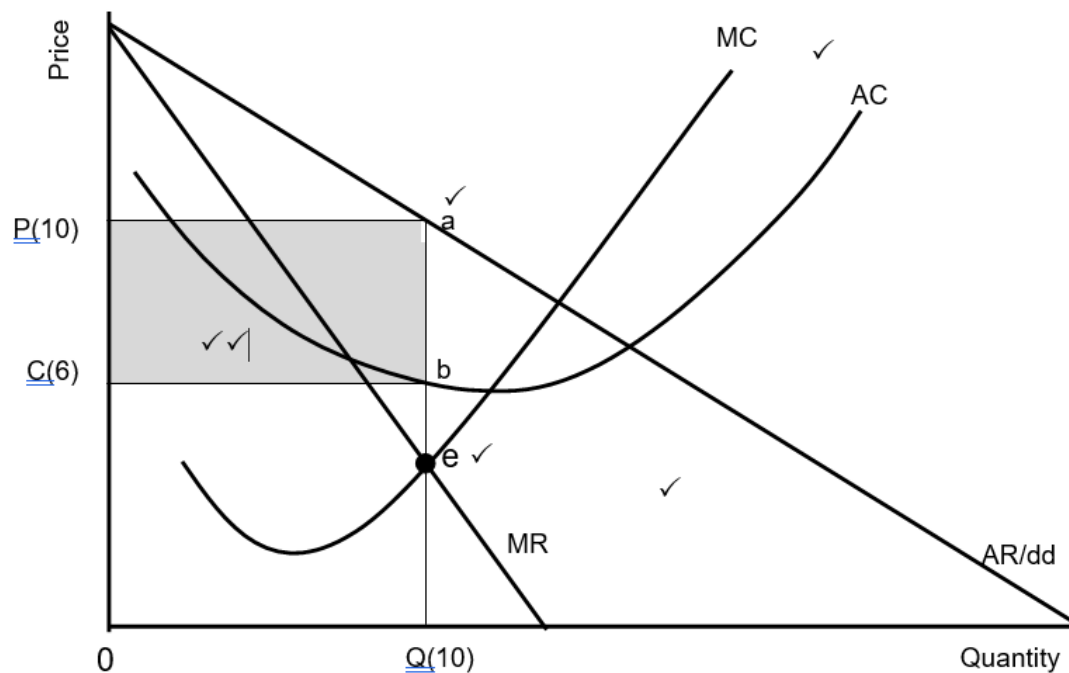
Question 3

INTRODUCTION

A monopoly is a market structure where only one seller operates. Entry is blocked and the product has no close substitutes ✓✓

(Accept any other correct relevant response)   (Max 2)

BODY: MAIN PART

Economic Profit

> Correct positioning and labelling of cost curves = 1 mark
> Correct positioning and labelling of revenue curves = 1 mark
> Correct indication of profit maximising point = 1 mark
> Correct indication of market price = 1 mark
> Correct indication of economic profit = 2 marks
> **Max 6 marks**

- Monopoly is subject to same technological and cost constraints as other market structures ✓✓
- The cost structure of the monopoly is the same than that of competitive businesses where the monopolist will try to maximize both short and long-term profit ✓✓
- Location of SAC in relation to market price determines profit or loss ✓✓
- The MR curve lies below the AR curve, halfway between the AR and the origin ✓✓
- The MC curve intersects the AC curve at its minimum point ✓✓
- Determine point where SMC = MR – point where production cost of last unit is equal to revenue it earns (point e) – profit-maximising production quantity of Q on horizontal axis ✓✓
- The monopolist will produce at the output (Q [10]) where MR=MC, because it can maximise profit at this level ✓✓
- Point a represents the average revenue at selling price (P[10]) while point b represents the average cost at the cost price (C[6]) ✓✓

- When the average revenue is more than the average cost, it results in an economic profit for the business / When the TR is more than TC it will result in an economic profit for the business ✓✓
- The monopoly makes economic profit when AC curve is below market price (AR)✓✓
- The monopoly blocks new entries so that competing businesses cannot reduce short run economic profit ✓✓
- Total income = Price x Quantity = OP(10) x OQ(10) = OPaQ (100)   ✓✓
  Total cost = Cost x Quantity = Oc(6) x OQ(10) = OCbQ (60)

  Economics profit = Income – Cost = 100 – 60 = CPab (40) ✓✓

(Max 10)

Economic Losses
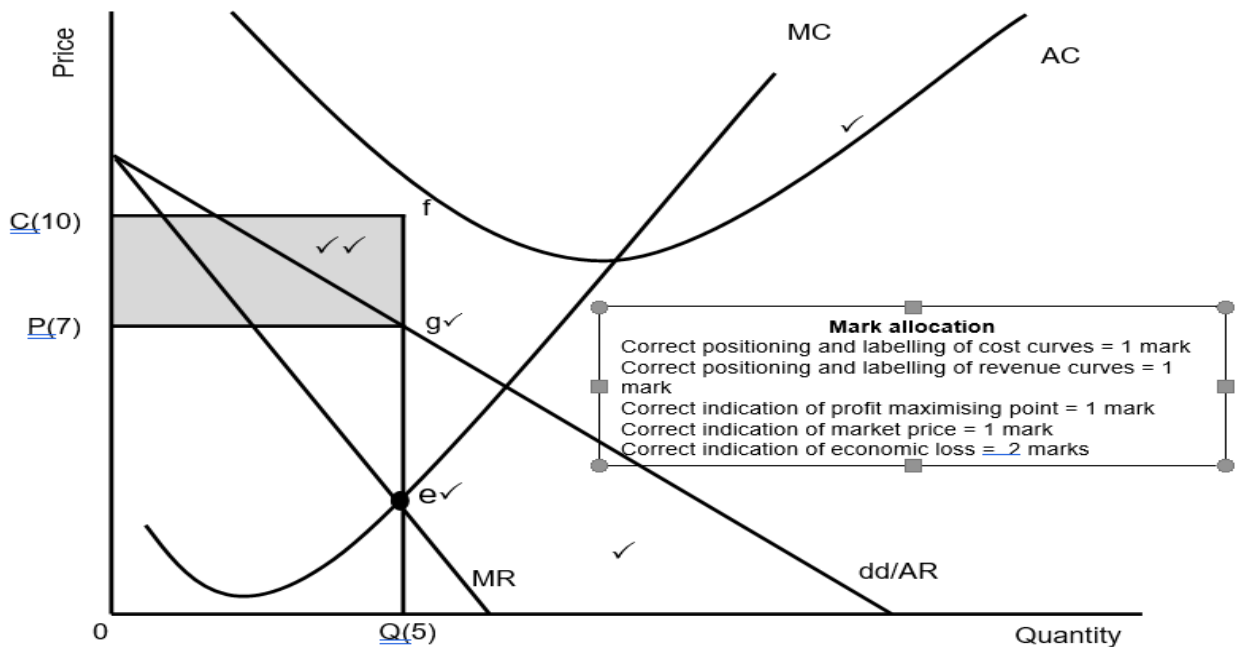
- The minimum point of SAC is higher than market price ✓✓
- A monopoly makes an economic loss when its revenue is less than its costs ✓✓
- The monopoly will produce at the output level where MR=MC, because it can minimise losses at this level ✓✓
- Point g represents the average revenue at selling price (P[7]) while point f represents the average cost at the cost price (C[10]) ✓✓
- The average cost is more than the average revenue, resulting in an economic loss for the business / When the TC is more than TR it will result in an economic loss for the business ✓✓
- The shaded area PCef shows the economic loss ✓✓
- The monopoly suffers an economic loss in the short run when the AC curve is above the market price (g) ✓✓

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- Total income = Price x Quantity = OP(7) x OQ(5) = OPgQ (35)

  Total cost = Cost x Quantity = OC(10) x OQ(5) = OCfQ (50)   ✓✓

  Economic loss = (PCfg)15 ✓✓   (Max 10)

                                                                                 (Max 26)

ADDITIONAL PART

Why does the performance of natural monopolies contradict the long-run equilibrium position of a monopoly?   (10 marks)

Natural monopolies' performances are not always in line with the long-run equilibrium position of a monopoly because:

- compared to a typical monopoly where economic profit always prevails over the long run, natural monopolies do not enjoy the benefits experienced by other monopolies✓✓
- natural monopolies require high development cost which prevent others from entering the market ✓✓
- natural monopolies supply goods and services to the nation as a whole and therefore it is difficult to set very high prices ✓✓
- Eskom is subjected to the National Energy Regulator in South Africa (NERSA) that determines the selling price of electricity in South Africa ✓✓
- a natural monopoly has experienced high maintenance cost compared to artificial monopolies, that compromises profits ✓✓
- natural monopolies cannot manipulate its quantities to increase prices ✓✓
- revenue seems to be less than cost due to corruption, non-payment by a large number of electricity users ✓✓
- under normal circumstances, a monopoly will shut down if average cost exceeds average revenue in the long run, but natural monopolies like SAA are often bailed out by the government due to its strategic position in the country ✓✓
- the internal (private cost) structure of natural monopolies have increased, but the private benefits (revenue of sales) stagnated due to poor maintenance of infrastructure ✓✓

  (Accept any other correct relevant response)   (Max 10)

CONCLUSION

The monopoly can continue to earn economic profit for as long as the demand for its product continues and its production costs stay the same ✓✓

QUESTION 4

INTRODUCTION

- A market is an institution or mechanism that brings together the buyers and sellers of goods or services✓✓ /
- A market structure is a framework of how a market is organised✓✓ /
- Monopolistic competition is a monopolistic market structure with many buyers and sellers where entry is relatively easy, but the product is differentiated✓✓ /
- Perfect competition is a market structure with many buyers and many sellers✓✓
  (Accept any other correct relevant response) Max (2)

MAIN PART

Number of businesses✓

- There is a <u>number of sellers</u> that are so <u>large</u>✓in the perfect market that individual market participants are insignificant in relation to the market as a whole ✓An example of a perfect market is the Securities Exchange, or the produce market ✓
- A <u>large number of sellers</u> are active in the monopolistic competitive market ✓Examples of monopolistic markets are producers of cleaning materials, cold drinks, toothpaste or soap✓

Nature of the product✓

- All products sold in the perfect market are homogeneous ✓ All these products are exactly the same regarding quality, appearance ✓✓ it makes no difference to a buyer where and from whom he or she buys the product. ✓✓
- Goods produced by businesses in a monopolistic competitive market are heterogeneous ✓They may differ slightly in appearance, shape, size and taste✓✓
- Differences may be imaginary ✓✓ e.g. medicine may have different brand names, but contain exactly the same basic ingredients ✓✓

Entry and exit from the market✓

- There is complete freedom of entry and exit of buyers and sellers in the perfect market ✓ Entry is not subject to any restrictions in the form of legal, financial, technological or other barriers✓✓
- Entry into the monopolistic competitive market is easy and free ✓ There are no barriers ✓✓ such as licenses, permits, patents and other restrictions ✓

Market knowledge ✓

- Both buyers and sellers have complete knowledge about prevailing market conditions in the perfect market ✓ It is assumed that buyers and sellers instinctively know, e.g. available quantities; price at which product is sold✓✓
- Market information in the monopolistic competitive market is incomplete ✓The many brands, variety of products or marginal difference causes a lack of information for sellers and buyers ✓✓

Control over price ✓

- There are so many businesses in the perfect market that the individual business is so small that no single business has control over the price of the product✓ The price is determined through market forces. In other words, the business can be regarded as a price taker ✓✓
- The individual business in the monopolistic competitive market has some control over the price of a product ✓The control over price depends entirely on the strength of brand loyalty ✓✓The business can be regarded as a price setter ✓✓

Collusion✓

- Collusion is not possible under perfect market conditions✓ There is no need for businesses to collude because they have no control over price setting ✓✓In addition, the market share of the individual business is so small and insignificant that it cannot manipulate the market in any way ✓✓
- Collusion does not occur in the monopolistic competitive market Π Individual businesses rely on brand loyalty to determine prices ✓✓ Prices can be manipulated by the strength of their brand loyalty ✓✓Prices are normally higher in cases where brand loyalty is intense ✓✓ Control over the market (output) is subject to brand loyalty due to product differentiation ✓✓

Marketing✓

- There is no need for marketing strategy in the perfect market due to complete market knowledge✓✓
- Marketing strategy is applied in the monopolistic competitive market ✓Deliberate advertising campaigns is launched to create brand loyalty✓✓

Profits✓

- The firm can realise economic profits in the short term, but only normal profits in the long run in the perfect market✓✓
- The firm can realise economic profits in the short term as well as the long run in the monopolistic competitive market✓✓
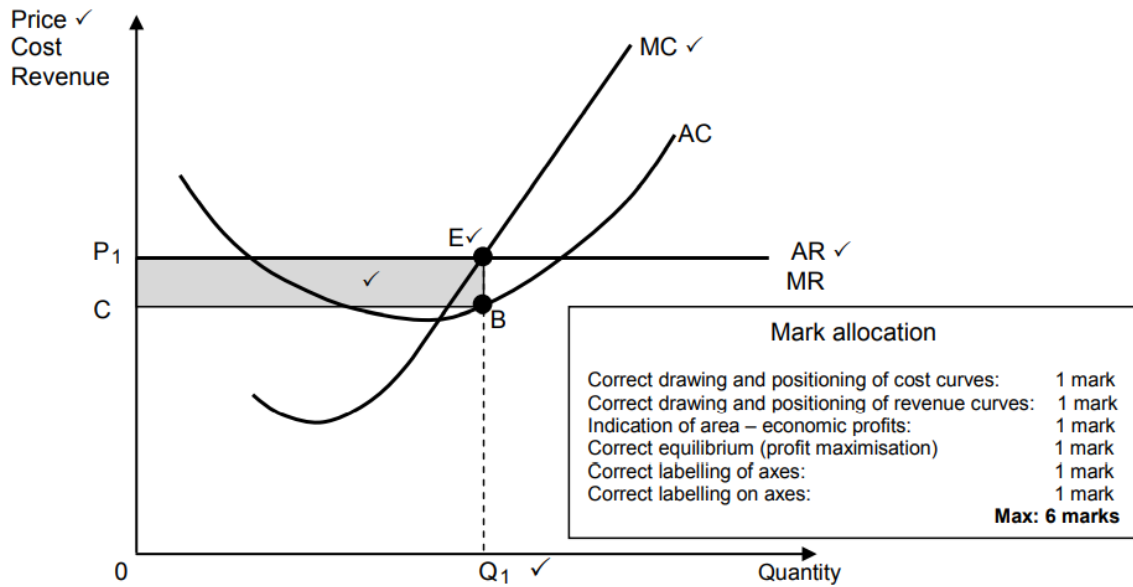
Demand curve✓

- The demand curve for the firm in the perfect market is horizontal✓✓
- D=AR=MR ✓✓
- The demand curve for the firm in the monopolistic competitive market is downward sloping✓✓
- AR=D (average revenue curve is also known as the demand curve) ✓✓
- The MR curve lies below AR curve✓✓

(Allocate a maximum of 8 marks for mere listing of facts/examples)

 (Accept any other correct relevant response) Accept tabular form Max (26)

ADDITIONAL PART

The diagram shows a graph with axes labelled "Price ✓ Cost Revenue" (vertical) and "Quantity" (horizontal). Curves MC ✓, AC, AR ✓ MR are shown. Points P₁, C on the vertical axis; E ✓ and B on the curves; Q₁ ✓ on the horizontal axis; origin 0.

Mark allocation
Correct drawing and positioning of cost curves:	1 mark
Correct drawing and positioning of revenue curves:	1 mark
Indication of area – economic profits:	1 mark
Correct equilibrium (profit maximisation)	1 mark
Correct labelling of axes:	1 mark
Correct labelling on axes:	1 mark
	Max: 6 marks

- The minimum point of the short-term average cost (AC) is lower than the market price P1✓

- The business is maximising profit at MR = MC at point E, the business will therefore produce quantity Q1 at the market price P1✓✓

- Total revenue is equal to 0P1 x 0Q1 and total cost is equal to 0C x 0Q1✓ ✓ Total revenue exceeds total cost, which means the business is making a profit that is represented by area P1CBE✓✓

- This profit is known as economic profit, which is profit that is made in addition to normal profit ✓✓

(Max 6) for graph – (Max 6) explanation (Max 10)

CONCLUSION

Whilst perfect market does not exist, it serves as a standard that imperfect markets, such as monopolistic competition, should strive to achieve✓✓ (Max (2)

 (Accept any other correct relevant response)

5. EXAMINATION TIPS

Lower order (easy) **(2 marks)**

These types of questions are found in Section A of the paper and expected to have full knowledge of economic concepts. e.g., 1.1 Multiple Choice, 1.2 Matching of Column A and B and 1.3 Concepts.

HINT: When the question requires you to "List" or "Name", you need not write a sentence. This MUST be done in bullet form.

This type of questions is found on the question paper: 2.1.1; 3.1.1; 4.1.1

- How to prepare/study for the examination on this topic
- Typical examination questions/ what to expect
- How to approach/ respond to the questions

Middle order (Moderate to difficult questions) **(2 marks)**

HINT: This type of question is typical deep-level thinking. You need to answer this question in a sentence that is comprehensive, and it should answer the question.

This type of questions is found on the question paper: 2.1.2; 3.1.2; 4.1.2

(2 marks)

3 General Examination Tips

- How to prepare/study for the examination in the subject. What learners could expect.
- How to collect easy marks (if appropriate)
- Include relevant information such as the format etc. to *walk learners through* what to expect in the entire examination.

PARAGRAPH QUESTIONS
Middle order (easy to moderate)   **(8 marks)**

> **HINT**: When a question requires to "explain", "discuss", "differentiate", etc. You need to answer in full sentences. The answers are found in textbooks.
>
> This type of questions is found on the question paper: 2.4; 3.4 and 4.4

PARAGRAPH QUESTIONS
Middle order (difficult)   **(8 marks)**

> **HINT:** The answers to these questions are not usually found in textbooks. You must apply your content knowledge to answer them. You need to do some deep-level critical thinking. You need to answer in full sentences.
>
> This type of questions is found on the question paper: 2.5; 3.5 and 4.5

HINT: Apply the following when answering the question paper:

Section A

- When answering Section, A – short questions, it is important not to rush but to read the questions carefully and to make sure you understand what the question is asking.
- You are looking for the MOST correct answer in the multiple-choice questions.
- There are 4 options so try to eliminate the completely wrong answer(s).
- Read carefully to identify the correct answer, identify the distractors that will also appear correct.
- The answer will NEVER be two options. Only ONE option is correct.
- Your answer will immediately be marked incorrect if you write TWO options.
- Give ONE term for each of the following descriptions, know your concepts.
- There are 6 marks for these questions in each paper (Q 1.3). Know your concepts and definitions to answer these questions.

Section B

- When answering Section B - Choose 2 of the 3 options.
- Read through the questions to select the ones that you know best.
- Use your 10 minutes reading time to identify the questions you know best.
- The mark allocation should guide you to the length of your answers.
- Discuss, explain, why, how and what type of questions should be answered in full sentences.
- For example: 4-mark questions must be answered with at least 2 facts, in full sentences.
- Calculations – Start off with the formula; then show all steps in the calculations.
- Specify the items when doing calculations – e.g

Consumption (C)	R 1000
Government spending (G)	R 800
Investment (I)	R 250
GDP	R 2050

Paragraph (8-mark questions)

- Ensure that you have sufficient facts to answer the question
- E.g., Differentiate between two concepts (X and Y). Write at least TWO facts for X and TWO facts for Y. The mark allocation will be (2x4=8)
- If required to explain or discuss, write at least four facts on the topic. The mark allocation will be (4x2=8).

Data response questions

- Answer any TWO of the three questions.
- Each data response question consists of 5 questions.
- Application type questions in question 2.5, 3.5 and 4.5 must be answered in full sentences and relate to relevant content.

SECTION C – is the essay questions

- Answer ONE of the two questions.
- The **introduction** should be a definition. Do not repeat any part of the question in your introduction
- **Make use of headings** where possible- a maximum of 8 marks are allocated for headings and examples.
- Include sufficient facts to cover the 26 marks in the body. These facts should be written in **full sentences** to obtain maximum marks.
- The **conclusion** must not repeat any of the facts already mentioned in the body or introduction. Read the table outlining the structure of the essay to ensure that you have an appropriate conclusion.

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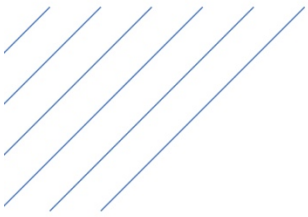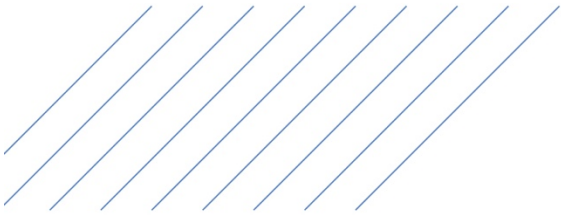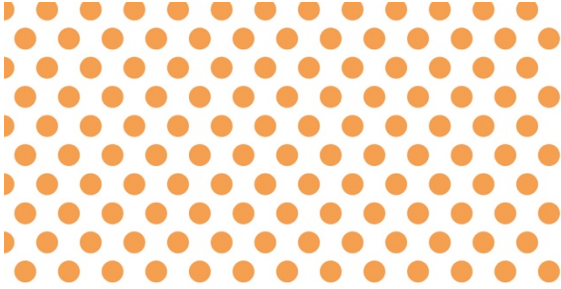
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