GAUTENG PROVINCE
EDUCATION
REPUBLIC OF SOUTH AFRICA

PROVINCIAL EXAMINATION

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GRADE 11

MARKING GUIDELINES

ECONOMICS (PAPER 2)

20 pages

EXEMPLAR

SECTION A (COMPULSORY)

QUESTION 1

1.1 **MULTIPLE-CHOICE QUESTIONS**

1.1.1 B – Less innovation ✓✓

1.1.2 C – fixed ✓✓

1.1.3 A – the cost per unit decreases and the output increase ✓✓

1.1.4 D – Infinite ✓✓

1.1.5 A – A common external tariff with the rest of the world ✓✓

1.1.6 D – capital ✓✓

1.1.7 C – greenhouse ✓✓

1.1.8 B – environmentally friendly production activities ✓✓ (8 x 2) (16)

1.2 **MATCHING COLUMNS**

1.2.1 G – The difference between the business's total income from the sale of products and explicit costs ✓

1.2.2 D – Usually, they operate in an oligopoly market structure ✓

1.2.3 F – Long enough for all factor inputs to be varied ✓

1.2.4 A – Demand increases when income increases ✓

1.2.5 C – Firms that produce goods and services in several countries ✓

1.2.6 H – Purchasing financial assets that can easily be converted into cash ✓

1.2.7 E – international agreements aimed at reducing greenhouse gases ✓

1.2.8 B – The variety of plant and animal life in a specific area ✓ (8 x 1) (8)

1.3 **GIVE A TERM**

1.3.1 Relative prices ✓

1.3.2 Average revenue ✓

1.3.3 Elasticity of supply ✓

1.3.4 Comparative advantage ✓

1.3.5 Subsidies ✓

1.3.6 Recycling ✓ (4 x 1) (4)

TOTAL SECTION A: 30

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SECTION B

Answer any TWO of the three questions in this section in the ANSWER BOOK.

QUESTION 2: MICROECONOMICS

2.1 Answer the following questions.

2.1.1 **Name any TWO examples of variable costs.**

- Water and electricity ✓
- Raw materials ✓
- Wages ✓
- Delivery costs ✓

(Accept any other correct relevant response.) (2 x 1) (2)

2.1.2 **Why are the AR and MR curves equal in the perfect market?**

- The AR and MR is the same because the firm is selling at the market price. ✓✓
- The firm is a price-taker, the price is determined on the market. ✓✓
- The firm does not have any influence on the setting of the price. ✓✓

(Accept any other correct relevant response.) (1 x 2) (2)

2.2 **DATA RESPONSE**

2.2.1 **Identify an example found in a product market from the information above**

- Vehicles ✓ (1)

2.2.2 **Name ONE factor of production missing from the above information**

- Entrepreneurship ✓ (1)

2.2.3 **Briefly describe the term *market*.**

- A mechanism that brings together demand and sellers ✓✓

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

2.2.4 **Explain the positive impact of competition on the markets**

- Competition results in markets being innovative because innovation is crucial to success. ✓✓
- Innovation leads to new products and new production technologies being developed. ✓✓
- Competition leads to consumer choice in markets. ✓✓
- Competition leads to fair and possibly lower prices in markets. ✓✓

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

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2.2.5 **How do natural disasters impact the supply of factors of production in the market?**

- Fewer products will be available in the market and firms will receive less income. ✓✓
- Selling of inferior products or selling of products on the black market will occur as the market does not have enough products to supply to the product market. ✓✓

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

2.3 **DATA RESPONSE**

2.3.1 **In the graph above, at which price does allocative efficiency occur?**

- A ✓ (1)

2.3.2 **Which letter indicates the profit maximisation of the firm above?**

- C ✓ (1)

2.3.3 **Briefly describe the term *imperfect market*.**

- It is a market in which perfect competition does not exist ✓✓

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

2.3.4 **What is likely to happen to the demand for this firm's output in the long run?**

- The short-run profit position will encourage other firms to enter the market, and the demand curve will shift to the left. ✓✓

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

2.3.5 **Explain the pattern of the MC curve.**

- The marginal cost curve first slopes downwards sharply, then gradually slopes upwards, because it is a change in total cost. ✓✓
- Under perfectly competitive markets, the MC curve is the same as the firm's supply curve. ✓✓
- The curve begins at the same place as the AVC curve. ✓✓

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

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2.4 **Briefly discuss the SMART principle in designing the objectives of businesses.**

Specific: ✓
- The idea must be identified and understood, ✓✓ e.g. the business must become the most profitable in the country. ✓

Measurable: ✓
- It must be possible to test or measure whether the goal has been reached. ✓✓ e.g. In order for a business to reach its goal it must make a profit of R5 000 a month ✓

Attainable: ✓
- All stakeholders must agree to the set goal. ✓✓

Realistic: ✓
- The goal must be within reach for the business. e.g. The business must be capable of reaching the required profit ✓✓

Time specific: ✓
- There must be a time limit on achieving a goal. e.g. the business must be the most profitable within a period of five years. ✓✓

(Accept any other correct relevant response.) (4 x 2) (8)

2.5 **How will a firm's objective in an oligopolistic market differ from the objective of a firm in a perfectly competitive market?**

- Perfect competition assumes profit maximising. ✓✓
- Oligopoly usually assumes collusion and a less volatile price. It still can assume profit maximising. ✓✓
- However, with collusion the profit maximising output/price can be for the industry and each firm is given an output quota which is not necessarily the profit maximising output for that firm. ✓✓
- A firm can compete by non-price competition or break the agreement. ✓✓

(Accept any other correct relevant response.) (8)

[40]

QUESTION 3: CONTEMPORARY ECONOMIC ISSUES

3.1 Answer the following questions.

3.1.1 **Name any TWO modes of transport involved globally.**

- Air ✓
- Road ✓
- Sea ✓
- Rail ✓

(2 x 1) (2)

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3.1.2 **How can the government successfully use command and control measures to ensure environmental sustainability?**

- Setting maximum permitted levels for resources e.g. emission (carbon dioxide), resource use (tons of fish) or minimum acceptable levels of environmental quality (in plantations). ✓✓
- Setting quantity standards: these methods focus on amounts or quantities of pollution caused, irrespective of the environmental impact, e.g. motorcar gas emissions. ✓✓

(Accept any other correct relevant response.) (1 x 2) (2)

3.2 **DATA RESPONSE**

3.2.1 **Identify ONE consequence of globalisation from the information above.**

- Ecological destruction ✓
- Climate change ✓
- Resource depletion ✓ (1)

3.2.2 **Which global institution assists countries in financial crisis?**

- The IMF ✓
- The World bank ✓ (2)

3.2.3 **Briefly describe the term *globalisation*.**

- Refers to the increasing interconnectedness and interdependence of the world's economies, societies and cultures ✓✓

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

3.2.4 **What are the effects of globalisation on developing countries?**

- Increased economic growth and investment, as well as access to new technologies and markets ✓✓
- Increased competition for jobs, loss of cultural identity, and increased inequality. ✓✓
- Local firms have to compete with multinational firms for business. ✓✓

(Accept any other correct relevant response.) Any (2 x 1) (2)

3.2.5 **Explain the effects of economic integration within the globe.** (2)

- Helps developing nations take advantage of economies of scale by integrating with developed nations. ✓✓
- Expands production capacity and creates new opportunities. ✓✓
- Leads to the development of new products with quality output. ✓✓
- Increases bargaining power, efficiency, and productivity levels of small countries. ✓✓

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

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3.3 **DATA RESPONSE**

3.3.1 **Identify the brown environmental issue illustrated above.**

- Waste pollution/Land pollution ✓ (1)

3.3.2 **Which areas are often highly polluted in a country?**

- Metropolitan areas ✓ (1)

3.3.3 **Briefly describe the term *environmental sustainability*.**

- Environmental sustainability is the ability of the environment to survive its use for economic activity. ✓✓

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

3.3.4 **Explain environmental taxes as a means to sustain the environment.**

- Environmental tax is imposed on the output or consumption of a good wherever external environmental costs are generated. ✓✓
- Are also known as green tax and are charged on items such as tyres. ✓✓
- The good already has a price and the tax has the effect of increasing the price. ✓✓
- To achieve a socially efficient output, the rate of the tax should be equal to the marginal external cost. ✓✓

(Accept any other correct relevant response.) Any (2 x 1) (2)

3.3.5 **Why are industries often blamed for contributing to environmental and air pollution?**

- They do not stick or comply with the production levels that is minimised according to the law. ✓✓
- They always consider their side of bargaining for more profitability than complying with the set minimum production levels. ✓✓
- There is little if any investment in the restoration and renewal of the environment they use for their production means. ✓✓

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

3.4 **Explain the main objectives of the Millennium Development Goals (MDGs).**

Concerns over environmental sustainability have the following aims:

- Integrating the principles of environmentally sustainable development into countries' policies and programs to reverse the loss of environmental resources ✓✓
- Reducing the rate of biodiversity loss significantly by 2010 ✓✓
- Reducing half the proportion of people without sustainable access to safe drinking water and basic sanitation ✓✓
- Achieving significant improvements in the lives of at least 100 million slum dwellers by 2020 ✓✓

(Accept any other correct relevant response.) (4 x 2) (8)

EXEMPLAR

3.5 **How can floods negatively affect the economy?**

- The disruption to business and consumer activity due to the destruction of both public and private infrastructure. ✓✓
- Disrupt the flow of food and consumer goods within the economy. ✓✓
- Increased local production costs which result in the increase in the market prices of goods and services. ✓✓
- Increased prices lead to an increase in inflation. ✓✓
- Importing food from other countries at higher prices. ✓✓

(Accept any other correct relevant response.) (8)

[40]

QUESTION 4: MICROECONOMICS AND CONTEMPORARY ECONOMIC ISSUES

4.1 Answer the following questions.

4.1.1 **Name any TWO barriers to entry in a monopoly market.**

- Patent ✓
- Licensing ✓
- Copyrights ✓
- Economies of scale ✓
- Exclusive ownership of resources ✓ Any (2 x 1) (2)

4.1.2 **How will the removal of South Africa from the free trade zone impact the country's economy?**

- It would cause job losses and decrease production in certain industries such as wine industry and tourism industry. ✓✓
- High tariffs will be charged to South Africa as it will no longer a beneficial to the union. ✓✓

(Accept any other correct relevant response.) (1 x 2) (2)

4.2 **DATA RESPONSE**

4.2.1 **Identify the constraint faced by businesses in the extract above.**

- Loadshedding ✓
- Power outages ✓
- High start-up costs ✓ (1)

4.2.2 **Name any ONE example of explicit costs incurred by businesses.**

- Water and electricity ✓
- Payments for wages and salaries ✓ (1)

EXEMPLAR

4.2.3 **Briefly describe the term *revenue*.**

- The income earned by a business from the sale of goods and services ✓✓

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

4.2.4 **What should the business look at when deciding on a level of output?**

- The business should look at its MC and MR, where the two meet, it should be the output. ✓✓

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

4.2.5 **Analyse the role of profit in a business.**

- Profit is the amount that a business ultimately earns, after subtracting expenses, such as operating costs from gross revenue. ✓✓
- Earning a healthy profit is essential to the healthy operation of any business. ✓✓
- Profit provides business with the money to pay expenses, and pay off debts and invest in growing business. ✓✓

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

4.3 **DATA RESPONSE**

4.3.1 **Identify the type of economy in which the primary sector will contribute the most to GDP**

(1)

- Slowly developing ✓

4.3.2 **Name any ONE fast developing country in Africa.**

- Rwanda ✓
- Côte d'Ivoire/Ivory Coast ✓
- Benin ✓
- Ethiopia ✓
- Tanzania ✓ (1)

4.3.3 **Briefly describe the term *North/South divide*.**

- The difference in wealth between the rich countries of the world in the North and the poor countries in the South ✓✓ (2)

4.3.4 **How does access to safe drinking water influence life expectancy?**

- More clean water allows people to experience a cleaner, more sanitary life. This cleanliness can reduce exposure to diseases caused by unclean water or poor hygienic conditions. ✓✓

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

EXEMPLAR

4.3.5 **Compare the characteristics of rich (North) and poor (South) countries**

NORTH	SOUTH
• Highly developed infrastructure ✓✓ • High level of consumption and production ✓✓ • Industrialised countries • Average incomes are very high. ✓✓ • Developed countries (Max. 2)	• Lack of and/or weak infrastructure ✓✓ • Low levels of production and consumption ✓✓ • Non-industrialised • Average income is very low. ✓✓ • Developing or emerging economies ✓✓ (Max. 2)

Any (2 x 2) (4)

4.4 **Briefly explain using the graphs below, how prices are determined for an individual producer in a perfect market.**

- The market forces of demand and supply determines the price. ✓✓
- The sellers are insignificant to influence the market price, hence they are price takers. ✓✓
- Each individual producer is forced to sell at the market price. Thus, the demand curve is flat/horizontal/perfectly elastic (curve DD). ✓✓
- The individual producer will not increase his price because he would not be able to sell any products, nor lower his price because he will be able to sell all his products at market price. ✓✓

(Accept any other correct relevant response.) (4 x 2) (8)

4.5 **What are the advantages of promoting globalisation?**

- Provides businesses with access to new markets and customers, which can help them expand their operations and increase their profits. ✓✓
- Improves efficiency by allowing countries to specialise in the production of goods and services that they are most efficient at producing, and to trade with other countries for goods and services that they are less efficient at producing. ✓✓
- Globalization can facilitate greater cooperation between countries on issues such as trade, security, and the environment. ✓✓
- Increases economic growth by increasing trade, investment, and the flow of capital between countries. ✓✓
- This can lead to increased productivity and higher living standards. ✓✓

(Accept any other correct relevant response.) Any (4 x 2) (8)

[40]

TOTAL SECTION B: 80

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SECTION C

Answer ONE of the two questions in this section in the ANSWER BOOK.

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/ Analyse/Compare/Evaluate/Distinguish/Differentiate/Explain/Draw a graph and explain/Use the graph given and explain/Complete the given graph/ Assess/Debate **A maximum of 8 marks may be allocated for headings/examples.** **Additional part:** Critically discuss/Evaluate/Critically evaluate/Debate/ Deduce/Compare/Distinguish/Interpret/How? /Suggest **A maximum of 2 marks may be allocated for mere listing facts.**	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 5: MICROECONOMICS 40 MARKS – 40 MINUTES

- **Discuss, in detail, the price elasticity of demand (PED) without the aid of graphs. (26 marks)**

- **How can government increase the price elasticity of supply of essential goods? (10 marks) [40]**

EXEMPLAR

INTRODUCTION

The price elasticity of demand can be defined as the percentage change in quantity demanded if the price of a product changes or price elasticity is a measure of how responsive demand is to a change in price. ✓✓
(Accept any other correct relevant lower-order introduction.) (Max. 2)

BODY: MAIN PART

Unitary elasticity ✓

- Unitary elasticity occurs when a specific change in price causes the same change in quantity demanded. ✓✓
- For example, when price increases by 20%, the quantity demanded will decrease by 20%. ✓✓
- Price elasticity of demand is equal to one (PED = 1). ✓✓
- When producers face a unit elastic demand curve, there is no reason for them to change the price of their product. ✓✓
- Their sales income will remain constant as the quantity will decrease by exactly the same percentage as the increase in the price of the product. ✓✓

Relative inelastic demand

- Relative inelastic demand occurs when a change in price will cause a smaller percentage change in quantity demanded. ✓✓
- Basic, necessary foodstuff that have no close substitutes, such as maize meal is an example of a product that tends to be inelastic. ✓✓
- Other examples include goods and services which require a small portion of the consumer's income such as matches, salt etc. and habit-forming products such as cigarettes and alcohol. ✓✓
- Price elasticity of demand will be less than one (PED < 1). ✓✓
- A relatively inelastic demand encourages producers to increase the price of their products as they will be able to increase their sales income. ✓✓
- A relative inelastic demand curve can be represented by a steep curve. ✓✓

Max. (2 x 2) (4)

Perfectly inelastic demand

- A perfectly inelastic demand refers to a demand that shows no response at all to price changes. ✓✓
- The price elasticity of demand in this situation is zero (PED = 0). ✓✓
- It implies that a change in price will cause no change in the quantity that consumers demand. ✓✓
- The demand curve will be a vertical line, parallel to the price axis. The graph shows that consumers plan to buy a fixed quantity of the product at a specific price. ✓✓
- Producers can increase their income by increasing the price of their product as the quantity demanded will not change.

EXEMPLAR

Relative inelastic demand

- Relative elastic demand occurs when a change in price will cause a greater percentage in quantity demanded. ✓✓
- The smallest change in price will cause a large change in quantity demanded.
- This happens to products which have close substitutes. ✓✓
- A price increase will cause most consumers not to buy the original product, but rather buy the substitute e.g. hot dogs and hamburgers. ✓✓
- The price elasticity will be greater than one (PED > 1). ✓✓
- Producers will be encouraged to decrease the prices of their products as the decrease in the price will lead to a larger than proportionate increase in the quantity demanded of the product. ✓✓
- A relatively elastic demand curve can be illustrated by a relatively flat demand curve. ✓✓

Perfectly elastic demand ✓

- The smallest change in price will cause an infinitely large change in quantity demanded. ✓✓
- The quantity demanded will drop to zero. PED = ∞. ✓✓
- A perfectly elastic demand curve can be shown with a horizontal straight line. ✓✓
- The curve illustrates that consumers are willing to buy any quantity of a product at a certain price level. ✓✓
- However, if the price increases only fractionally, there will be no demand for the product. ✓✓

(A maximum of 8 marks for headings/examples.)
(Accept any other correct relevant response.) (Max. 26)

ADDITIONAL PART

How can government increase the price elasticity of supply of essential goods?

- Governments might attempt to increase the elasticity of the supply of a product, for example training programmes to increase the availability of labour with appropriate skills, providing loans for capital investment, etc. ✓✓
- By investing in infrastructure such as roads, ports, and power supply, governments can reduce the cost of production and transportation, making it easier and more affordable for suppliers to bring essential goods to the market. ✓✓
- Governments can reduce trade barriers such as tariffs and quotas, which can increase competition and encourage suppliers to provide more essential goods at lower prices. ✓✓
- Governments can encourage innovation in the production and distribution of essential goods by providing funding for research and development or offering tax incentives to companies that invest in new technologies. ✓✓

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- Governments can encourage competition among suppliers of essential goods by promoting market entry and preventing monopolies from forming, which can increase the price elasticity of supply. ✓✓
- Governments can provide subsidies to producers of essential goods to reduce their costs of production, which can encourage them to increase their supply of these goods. ✓✓

(A maximum of 2 marks may be allocated for mere listing of facts.)
(Accept any other correct relevant response.) (Max. 10)

CONCLUSION

Price elasticity of demand helps economists, producers and the government to make valuable predictions about what will happen when the price of a product increases or decreases. ✓✓
(Accept any other relevant correct higher-order conclusion.) (Max. 2)

QUESTION 6: CONTEMPORARY ECONOMIC ISSUES 40 MARKS – 40 MINUTES

- **Examine, in detail, the problems threatening the environment. (26 marks)**
- **Evaluate the implementation of the goals of the World Summit on Sustainable Development in South Africa. (10 marks) [40]**

INTRODUCTION

Environment refers to the physical surroundings and physical conditions that affect people's lives. It includes land, sea, and the atmosphere. As such it provides a flow of goods and services such as: materials e.g. soil, water, minerals and timber and energy fossil fuels, tides and winds. ✓✓
(Accept any other correct relevant lower-order introduction.) (Max. 2)

BODY : MAIN PART

Natural environmental degradation ✓

- Natural environment degradation refers to the destruction and loss of native species and natural processes such that only certain components of the original biodiversity and ecological functions persist, often with significantly altered natural communities. ✓✓
- It includes situations that arise from local influences such as extreme weather, local infections etc. ✓✓
- It is estimated that in South Africa, water erosion affects 6.1 million hectares of cultivated soil. ✓✓
- Wind erosion has a more severe effect on cultivated soil, estimated at 10.9 million that is currently selected. ✓✓
- Humans alter the natural environment in three major ways:
  - Transforming the land and the sea, through land clearing, forestry, grazing, urbanisation, mining, trawling, dredging, and so on (activities often called "development"). ✓✓
  - Adding or removing species and genetically distinct populations via habitat alteration or loss, hunting, fishing, and introductions and invasions of species; and ✓✓

EXEMPLAR

  - Altering the major biogeochemical cycles of carbon, nitrogen, water and synthetic chemicals. ✓✓
- Most degradation of natural resources results from the cumulative activities of farmers, households and industries, all trying to improve their socio-economic well-being. ✓✓

Human-induced environmental degradation. ✓

- The excessive claims of humans on nature, has an impact in three areas, namely: non-renewable resources, renewable resources and economic waste. ✓✓

Economic waste ✓

- Waste occurs in the economy because of a simple natural law: the total mass of inputs to a transformation process equal to the total mass of outputs. If inputs do not emerge as desired products, they must therefore appear as unwanted by-products or waste. ✓✓
- Economic waste causes pollution and occurs in two forms, namely solid waste and gas waste. ✓✓

Pollution

Pollution is the emission of residual waste on the environment which is harmful to the plants, humans and animals. Therefore, pollution is also the inability of the environment to absorb the waste that is continuously dumped. ✓✓

Solid waste ✓

- In solid form, waste presents itself as chemical liquids and concrete things, e.g. used tyres and plastic bags. These are synthetic things which do not occur in nature and nature does not have a way to decompose them which causes land or environmental pollution. ✓✓

- **Land pollution** or **environmental pollution**: ✓ This refers to the deterioration in the quality of land and fertility of soil. The causes of land pollution are poor agricultural practices, increased mineral exploitation, industrial waste dumping and indiscriminate disposal of urban wastes. Land pollution can also result from the use of chemicals in weed-killers and pesticides. ✓✓
- Some harmful chemical particles are so small that they are carried in gasses, for example the acid in acid rain which causes air pollution. ✓✓
- Residual waste is created in consumption, for example, household waste, scrapped consumer durables and litter. ✓✓

Other forms of pollution

- **Water pollution**: ✓ Takes place when water from the rivers and oceans is contaminated by sewage, oil spillage, release of chemicals into the rivers and oceans, mining activities etc. Water pollution harms animals, fish, humans and plants. It causes illnesses and leads to poor hygiene and health risks.✓✓

EXEMPLAR

- **Food pollution**: Takes place during the production of food either through the use of dangerous pesticides by farmers, modified food or contamination of food during the production process. ✓✓
- **Noise pollution**: ✓ It is caused by industries that use machines which release too much noise, noise from cars and aeroplanes and loud music. Too much noise can damage the eardrums and affect hearing (partial or total loss of hearing). ✓✓

Poverty and environmental degradation ✓

- Difficulty in meeting community needs often leads to pressure on land, over-exploitation of soils and deforestation. ✓✓
- Poverty often causes people to put relatively more pressure on the environment which results in larger families (due to high death rates and insecurity), improper human waste disposal leading to unhealthy living conditions, more pressure on fragile land to meet their needs, overexploitation of natural resources and more deforestation. ✓✓
- Insufficient knowledge about agricultural practices can also lead to a decline in crop yield and productivity. ✓✓
- Environmental problems cause more suffering in the community as environmental damage increases the impact of floods and other environmental catastrophes. Soil erosion, land degradation and deforestation lead to a decline in food production, and this, along with a shortage of wood for fuel, contributes to inflation. ✓✓
- All economic activities are directly, indirectly or remotely based on natural resources and any pressure on natural resources can cause environmental stress. Environmental damage can prevent people, especially the poor, from having good and hygienic living standards. ✓✓
- Lack of education and improper implementation of poverty eradication policies at the grass-root level have increased poverty and environmental degradation. Due to a lack of sufficient resources and improper knowledge, poverty-stricken people tend to overuse every resource available to them when their survival is at stake. ✓✓

Agricultural development and deforestation ✓

- South Africa's agricultural sector is one of the world's most diverse, consisting of corporate and private intensive and extensive crop farming systems, including vegetable, fruit, nuts, and grain production. ✓✓
- The well-developed commercial farming sector in South Africa is the backbone of the country's agricultural economy and in 2020 showed the best growth rate of all economic sectors, coming in at 13,1 percent. ✓✓
- Many farming practices – such as burning fields and using gasoline-powered machinery – are significant contributors to the buildup of greenhouse gases in the atmosphere. ✓✓
- The agricultural sector consumes about 69 percent of the planet's fresh water. Without creative conservation measures in place, agricultural production consumes excessive water and degrades water quality. This adversely impacts freshwater systems throughout the country. ✓✓

EXEMPLAR

- Agriculture is the leading source of pollution in many countries. Pesticides, fertilizers and other toxic farm chemicals can poison fresh water, marine ecosystems, air and soil. They also can remain in the environment for generations. Many pesticides are suspected of disrupting the hormonal systems of people and wildlife. Fertiliser run-off impacts waterways and coral reefs. ✓✓
- From 2001 to 2021, South Africa lost 1,53 Mha of tree cover, equivalent to a 26% decrease in tree cover since 2000, and 945 Mt of CO_2e emissions. ✓✓
- One of the main causes is agriculture. Farms needs many acres of land, especially commercial farming. It is bad enough cutting down forests, but farmers also use pesticides to kill off species that eat their crops. Some of this pesticides end up in rivers, killing inhabitants near the area. ✓✓
- Deforestation has the following effects:

    - It reduces the habitats of plant and animal species. ✓✓
    - It influences rainfall patterns. ✓✓
    - It decreases rain formation. ✓✓

Land degradation ✓

- Land degradation is a mismatch between land quality, land usage and land productivity. ✓✓
- Land degradation caused by woody encroachment is a major bio-social issue for the rangelands of South Africa, exacerbated by intersecting factors including climate change, historical land tenure policies and post-apartheid reforms. ✓✓
- Land degradation is a negative trend in land conditions, caused by direct or indirect human-induced processes including anthropogenic climate change, expressed as long-term reduction or loss of biological productivity, ecological integrity or value to humans. ✓✓
- Communal land degradation in South Africa has been especially characterized by woody plant encroachment. This phenomenon involves an increase in tree or shrub densities in savannas, altering ecosystem functions and services, by reducing water availability and total productivity of the vegetation, altering fire regimes, carrying capacity, biodiversity and carbon storage capacity. ✓✓
- Land consumption means that increasing numbers of ecosystems are destroyed to create space for urban, industrial and farming developments. Some productive land is consumed by more roads and railway lines. The biodiversity (animals, plants and water) that is destroyed by these developments can never be reclaimed. ✓✓
- Soil erosion: There is no known way that we can replace our soil. In South Africa annual soil losses are estimated at 300 – 400 million tons, nearly three tons per hectare. If the world's soil resources are being so rapidly depleted, the ability of the world to feed itself is also being affected. ✓✓

EXEMPLAR

Industrial development, mining, and environmental degradation ✓

- Pollution from mining activities is a direct cause of groundwater pollution in South Africa. ✓✓
- Mining exploration has a negative impact on nature removal of vegetation for survey lines, vegetation damage and soil erosion from vehicle tracks, abandoned equipment and supplies. ✓✓
- When some of the abandoned pits in South Africa become filled with stagnant water they become infested with mosquitos and become a breeding site for malaria and other diseases. This has a major impact on the sustainability of animals and on people, as the diseases are very deadly. ✓✓
- The risks from unrehabilitated mines extend far beyond the people who access the sites – they risk polluting the water of millions of South Africans. ✓✓
- Coal across South Africa is found predominantly in ores with sulfur-bearing minerals. When these ores come into contact with water and air, sulfuric acid is created, which can lead to further leaching of heavy metals from ores. This reaction poses significant risks to water and agricultural land in many parts of South Africa, including Mpumalanga.✓✓
- Residual coal deposits in Mpumalanga are also accessed by artisanal miners, known as zama zamas [an isiZulu term meaning “to try and try again”]. Artisanal miners may eke out a living, but at high risk: they have little protective equipment and enjoy no labour or health and safety protections while working in dangerous underground mine shafts. ✓✓
- Chlorofluorocarbon (CFCs): These are gases that once were used as propellants in aerosol cans and as coolants in air conditioners and refrigerators. They appear to have destroyed some of the ozone layer of the atmosphere. Ozone is vital to the sustainability of humans and animals. Reducing the ozone (ozone depletion) causes, among others, increasing ill health such as respiratory problems, pneumonia, heart diseases and skin cancer in humans and animals. ✓✓
- Carbon dioxide: enormous quantities of fossil fuels – coal, oil, and gas, have been burned by industries. When they burn, they produce carbon dioxide. Carbon dioxide is absorbed into the oceans and used by plants in photosynthesis. If too much carbon dioxide and other gases are emitted in the atmosphere, this will create the greenhouse effect, trapping radiation arriving at the earth and produced on the earth, leading to global warming. ✓✓

Human settlement, urbanisation, and environmental degradation ✓

- According to Statistics South Africa's General Household Survey of 2021, slightly more than eight-tenths (83,6%) of South African households lived in formal dwellings in 2021, followed by 11,7% in informal dwellings, and 4,2% in traditional dwellings. ✓✓
- South Africa is urbanising rapidly: 63% of South Africans are already living in urban areas and the statistics will rise to 71% by 2030. ✓✓
- The most important reasons behind rapid urbanising in South Africa are rural-urban migration and natural population growth that result in the proliferation of informal settlements. It is estimated that at least 1.2 million households reside in shacks in at least 2 700 shack areas nationwide. ✓✓

EXEMPLAR

- Rural-urban migration helps reduce pressure on the rural environment but puts pressure on the urban environment such as demand for land and services. ✓✓
- Unplanned informal settlements are one of the consequences of large-scale rural urban migration. ✓✓
- The government struggles to meet the community needs. Run-off from storm water is a common problem in unplanned settlements due to the lack of proper sewage and drainage systems. ✓✓
- Unplanned settlements with no sanitation may lead to waterborne diseases such as typhoid fever, diphtheria and cholera. ✓✓

(A maximum of 8 marks for headings/examples)
(Accept any other correct relevant response.) (Max. 26)

ADDITIONAL PART

The goals of the WSSD were not successfully implemented in South Africa, because:

- Poverty eradication – the WSSD has not been that successful as more than half of the people in South Africa are living in harsh poverty / surviving on less than one US dollar per day. ✓✓
- Unemployment is on the increase and also increases the poverty level. ✓✓
- Water and sanitation – South Africa is in extreme drought in certain parts, and many communities still lack sanitation facilities. ✓✓
- Energy – South Africa still does not make sufficient use of renewable energy sources for sustainable development. ✓✓
- Chemical usage – South Africa is not achieving the objectives of reducing pollution levels and greenhouse gases. ✓✓
- Eskom, as the major polluter in South Africa, is still using coal as the primary source of electricity. ✓✓
- Environmental management – South Africa is not largely successful in terms of improving water quality/biodiversity/forestry destruction, etc. ✓✓

The goals of the WSSD were partially successful, because:

- Environmental management – South Africa is gradually phasing in environmentally friendly energy resources. ✓✓
- Solar farms are increasingly feeding the national power grid as the number of solar farms is increasing. ✓✓
- Many houses were fitted/supplied with solar geysers to reduce the dependency on the national power grid. ✓✓
- Eskom is using new technology in its coal-fired generators that reduces air pollution.
- Informal settlements were also supplied with electricity to reduce the burning of coal, thus reducing air pollution. ✓✓
- The government has made the provision of water a priority through the RDP and many communities have access to water, compared to previous governments. ✓✓

(A maximum of 2 marks may be allocated for mere listing of facts.)
(Accept any other correct relevant response.) (Max. 10)

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CONCLUSION

Environment is important for the continuation of life therefore it is important for the present generation to make sure that it is used without compromising the needs of the future generation. ✓✓
(Accept any other relevant correct higher-order conclusion.) (Max. 2) **[40]**

TOTAL SECTION C: 40

TOTAL: 150

EXEMPLAR