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education
MPUMALANGA PROVINCE
REPUBLIC OF SOUTH AFRICA

# GENERAL EDUCATION AND TRAINING

## GRADE 9

## SOCIAL SCIENCES
## GEOGRAPHY
## NOVEMBER 2023

**MARKS: 75**

**TIME: 1H30 HOURS**

**This question paper consists of 8 pages including the cover page**

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**Instructions to the learner**

1. This question paper consists of **TWO** sections.
2. Section A consists of 35 marks and section B consists of 40 marks.
3. ALL questions are compulsory.
4. Always refer to **sources** when answering questions.
5. Read the questions carefully before answering.
6. Number your answers correctly.
7. Start EACH section on a NEW page.
8. Refer to the mark allocation as a guide to assist you with the number of facts that must be written down to answer a question.






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## SECTION A

### QUESTION 1: Surface forces that shape the earth

1. Choose the correct answer from the options given in brackets for each of the following sentences. Write only the correct word you have chosen next to the question number in your answer book **e.g. 1.1 alternative**.

1.1 The process that breaks down rocks into smaller pieces is called (erosion/weathering). (1x1)

1.2 A chemical process whereby iron minerals in rocks react with dissolved oxygen to produce a red or yellow color, called rusting, is called (oxidation / carbonation). (1x1)

1.3 A process whereby hard rock expands during hot days and contracts during cold nights to eventually split in layers (like an onion) causing rounded shaped rocks, is called (blocking / exfoliation). (1x1)

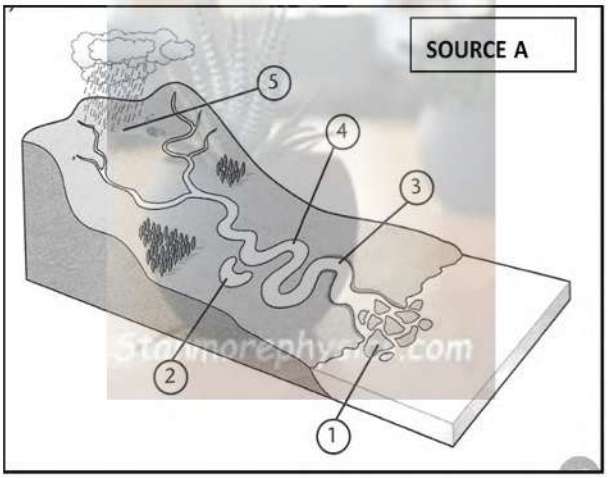
1.4 The following is not an example of chemical weathering (oxidation/ frost shattering) (1x1)

1.5 The place where a river starts is called its (mouth / source). (1x1)

**[5]**

### QUESTION 2

Use Source A to answer question 2.1 to 2.4.



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2.1 Label the features on the source numbered 1 to 5. (1x5)

2.2 Explain briefly how the feature numbered 2 is formed. (1x2)

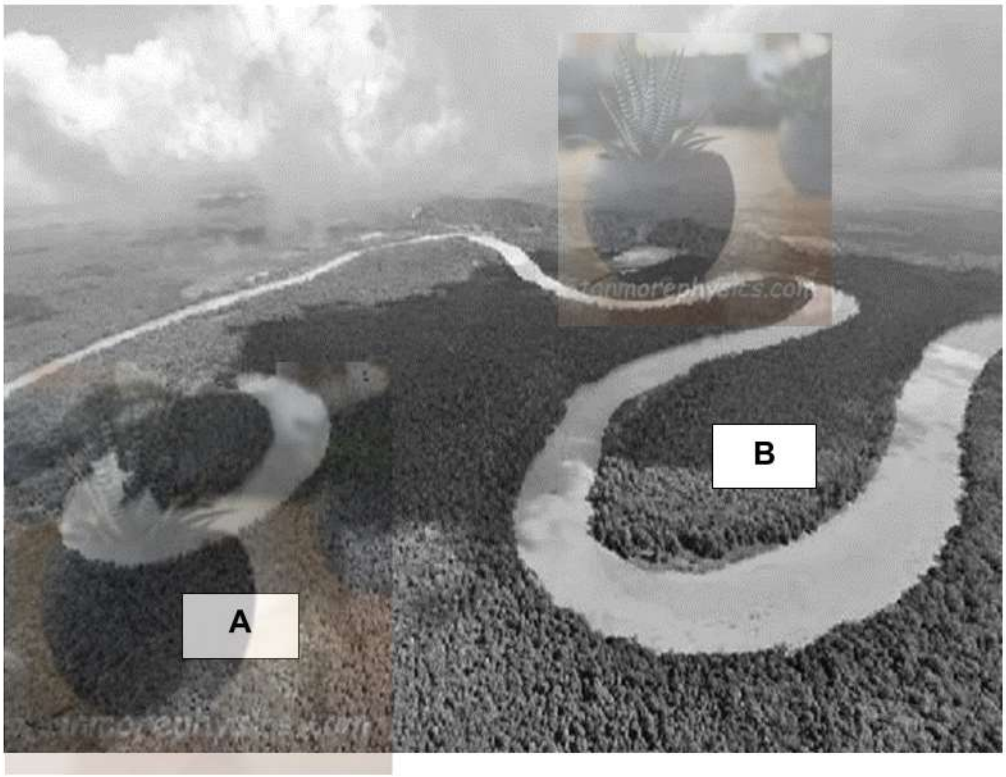
2.3 Name the **THREE** sections that a river course can be divided into. (3x1)

2.4 In which part of a river course is downward erosion more active? (1x2)

**[12]**

**QUESTION 3**

3. Study the diagram below and answer the questions 3.1 and 3.2




*Source: https://alchetron.com/cdn/oxbow-lake-829c8d96-7726-46d2-9e73-8b227488ace-resize-750.jpeg*

3.1 Identify the features marked A and B in the diagram above. (2X1)

3.2 Explain how the feature marked A is formed, mention **TWO** points. (2X2)

3.3 Explain how the feature marked B is formed, mention **TWO** points. (2x2)

**[10]**

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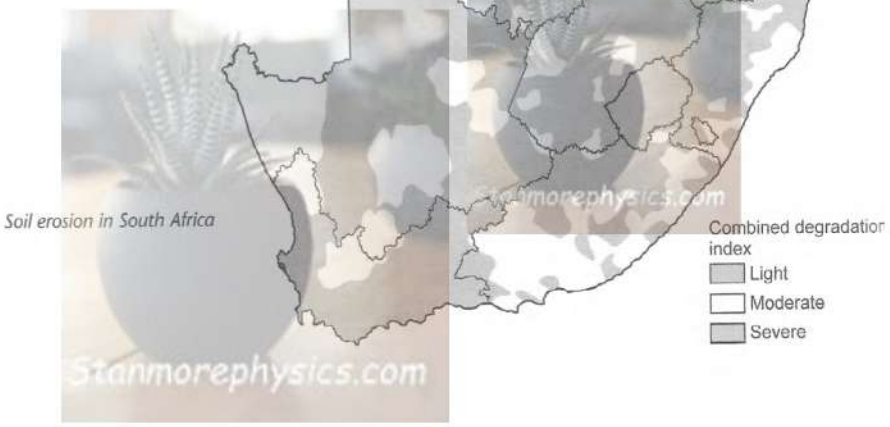
## QUESTION 4

4. Read the following Case Study, Source B thoroughly and answer questions 4.1 to 4.3

**SOURCE B**

**CASE STUDY : Agriculture as a contributor to soil erosion**

South's Africa's dry climate, history and farming practices have led to large areas of the country being badly affected by soil erosion. Between 300 and 400 million tons of soil is lost from South Africa's farms every year. Soil erosion is a serious issue because it affects the ability of farmers to produce enough food to feed the population.




*Social Sciences: Solutions for All: Grade 9*

4.1 Define the term "soil erosion". (1X2)

4.2 Name **TWO** negative effects of soil erosion. (2X1)

4.3 List any **TWO** measures that can be put in place to prevent soil erosion. (2X2)

**[8]**

**SECTION A TOTAL 35**

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## SECTION B

### QUESTION 5: Resource use and Sustainability

5.1 Supply the term used for each the following

5.1.1 Resources that cannot be replaced once they are used up. (1X1)

5.1.2 Using a resource carefully so that it is still available in the future and it is not harmed or used up. (1X1)

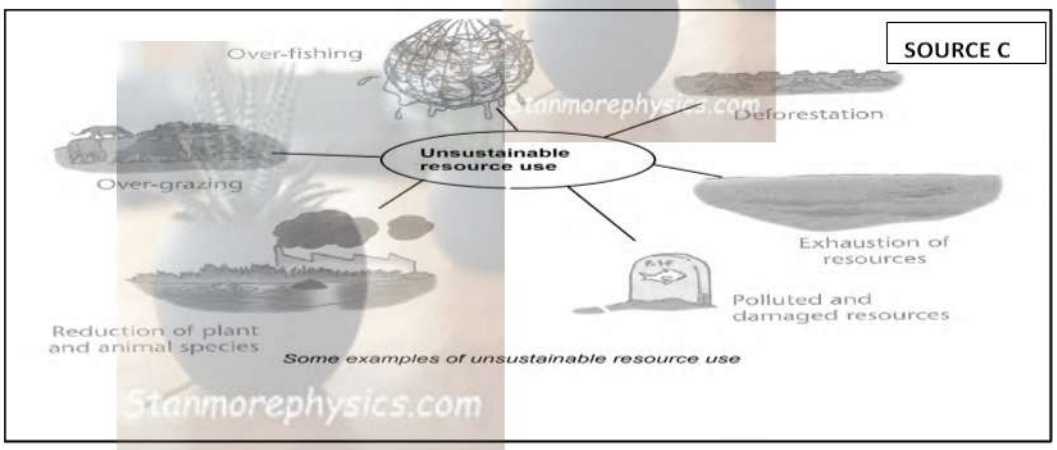
5.1.3 Made of substances that will decay naturally in the environment. (1X1)

5.1.4 Secure access to enough affordable and nutritious food. (1X1)

5.1.5 The amount of carbon an individual, business or even a country produces. (1X1)

**[5]**

5.2 Study Source C showing examples of unsustainable resource use and answer 5.2.1 to 5.2.6




*Social Sciences: Solutions for All; Grade 9*

5.2.1 What do you understand by the term over-grazing? (1x2)

5.2.2 Mention any **TWO** negative impacts of over-grazing. (2x1)

5.2.3 What do you understand by the term "over-fishing? (1x2)

5.2.4 Give **TWO** causes of over-fishing. (2x1)

5.2.5 Describe the effects of over-fishing on people and the environment. (1x2)

5.2.6 Explain briefly, using your own words how each of the following can prevent resources from being used unsustainably.

(a) Improved farming methods (1x1)

(b) Role of individuals or businesses (1x1)

**[12]**

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**QUESTION 6: Use of indigenous knowledge, science and technology in food production and food security**

6. Critically analyse the photograph of indigenous knowledge that contributes to food production and food security. Use this image to answer some of the questions asked below



*Taken from Google @Indigenous knowledge of food production*

| | | |
|---|---|---|
| 6.1 | Explain the meaning of the term food security. | (1X2) |
| 6.2 | What type of farming is practiced in the above photograph? | (1X1) |
| 6.3 | What type of food is produced in the above photograph? | (1X1) |
| 6.4 | How are the people in the photograph above helping to contribute to food security? | (1X2) |
| 6.5 | Use the photograph to help explain the concept of appropriate technology. | (1X2) |

**[8]**

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## QUESTION 7: Genetic modification of crops

7. Study **source D** and answer the question 7.1 to 7.5

**SOURCE D**

### Genetic modification of crops

Genetic modification is a scientific method of changing the natural growth and development of a plant or animal in some way. Scientists can alter the biological qualities of plant seeds to design crops that will grow in different climates or be resistant to weed killers and pests.

#### Advantages of genetically modified crops

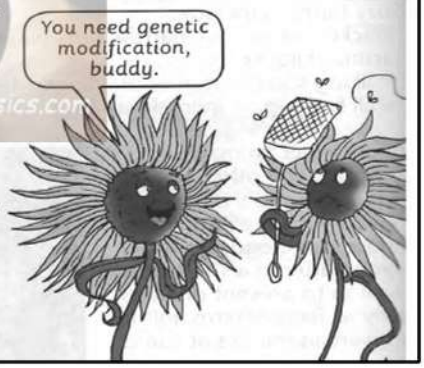
- Genetic modification can artificially increase the vitamin content of plants, making them more healthy and nutritious.
- Genetically modified crops can help to reduce world poverty, hunger and disease.
- Farmers can save money on pesticides because seeds can be modified to resist specific pests.
- Poor quality land can be planted with crops that have been genetically modified to grow in certain conditions, e.g. salty soils.



*Crops grown using genetic modification*

#### Disadvantages of genetically modified crops

- Eating foods from genetically modified crops may not be safe as scientists do not know how the seeds will change over time.
- After genetically modified seeds have been introduced into an area they may contaminate ordinary varieties of the same plant. This could wipe out older varieties of plants.
- In time, pests and diseases may be able to invade the new crops. They could be expensive and difficult to control.
- Big companies that produce genetically modified seeds charge high prices, which poor farmers cannot afford.




7.1 In your own words, explain the concept of genetic modification of crops. (1X1)

7.2 Look at the cartoon above. Is the cartoonist indicating that genetic modification of crops is good or bad? Give reason for your answer. (1X2)

7.3 List any **TWO** advantages of genetically modified crops. (2X1)

7.4 Mention **TWO** disadvantages of genetically modified crops. (2X1)

7.5 In a paragraph of eight to ten lines, discuss the advantages and disadvantages of using science and technology to increase food production. Include examples in your answer. (8)

**[20]**

**SECTION B TOTAL 40**

**GRAND TOTAL 75**

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# GENERAL EDUCATION AND TRAINING

## GRADE 9

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## SOCIAL SCIENCES
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## MARKING GUIDELINES

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**MARKS: 75**

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**SECTION A**

- *There are no half marks.*
- *Use a tick* (✓) for the correct answer.

Question 1

| NO | Expected answer | Clarification | Mark |
|---|---|---|---|
| 1.1 | Weathering √ | **One** correct answer. | 1 |
| 1.2 | Oxidation√ | **One** correct answer. | 1 |
| 1.3 | Exfoliation√ | **One** correct answer. | 1 |
| 1.4 | frost shattering √ | **One** correct answer. | 1 |
| 1.5 | Source√ | **One** correct answer. | 1 |
| | | | **[5]** |

Question 2

| | | | |
|---|---|---|---|
| 2.1 | (a) Floodplain√<br>(b) Oxbow lake√<br>(c) Mouth √<br>(d) Meander √<br>(e) Source √ | **One** correct answer.<br>**One** correct answer.<br>**One** correct answer.<br>**One** correct answer.<br>**One** correct answer. | 1<br>1<br>1<br>1<br>1 |
| 2.2 | An oxbow lake it is formed when a **meandering river erodes**√ through the **neck of one of its meanders**√<br>An oxbow lake form when a **meander loop** is **cut off from the rest of the river**. √√ | **2 marks** = Correct explanation **OR** bolded words mentioned on the answer.<br>**1 mark** = Mentioned **one** bolded words.<br>**0 mark** = No answer, incorrect or irrelevant answer. | 2 |
| 2.3 | Upper course√, Middle course√, Lower course√ | **3 marks** = mentioned 3 section of the river<br>**2 mark** = mentioned 2 section of the river<br>**One mark =** mentioned 1 section of the river.<br>**0 mark** = No answer, incorrect or irrelevant answer. | 3 |
| 2.4 | **Vertical (downwards)** erosion often occurs in the upper course of a river. √√ | **One** correct answer. | 2 |
| | | | **[12]** |

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| NO | Expected answer | Clarification | Mark |
|---|---|---|---|
| Question 3 | | | |
| 3.1 | A. Oxbow lake √<br>B. Meander √ | **One** correct answer.<br>**One** correct answer. | 1<br>1 |
| 3.2 | • Oxbow lake forms when a river creates a meander, due to the river eroding the bank. √√<br>• After a long period of time, the meander becomes much curved. √√<br>• Eventually the neck of the meander becomes narrower and the river cuts through the neck during a flood, cutting off the meander. √√<br>**Any TWO correct relevant answers** | **4 marks** = two points mentioned<br>**2 marks** = 1 point mentioned<br>**0 mark** = no answer/incorrect or irrelevant | 4 |
| 3.3 | • Meanders are a result of the interaction of water flowing through a curved channel with underlying river bed. √√<br>• Meanders are produced when water in the stream channel erodes the sediments of an outer bend of streambank and deposit it. √√<br>• Meanders are formed when vertical erosion is replaced by a sideways form of erosion called lateral erosion, plus deposition within the floodplain. √√<br>**Any TWO correct relevant answers** | **4 marks =** two points mentioned<br>**2 marks =** 1 point mentioned<br>**0 mark =** no answer/incorrect or irrelevant | 4 |
| | | | **[10]** |
| Question 4 | | | |
| 4.1 | Soil erosion is the **wearing away**√ of the **top layer** √of soil, which is the most fertile and nutrient filled layer | **2 marks** = Concept fully defined **OR** bolded words mentioned on the answer.<br>**1 mark** = Mentioned **one** bolded word<br>**0 mark** = No answer, incorrect or irrelevant answer. | 2 |
| 4.2 | • It creates the circumstances for desertification. √<br>• It causes landslides, which are falling of lands due to gravity, and deposits of silt in low-lying areas, which are both natural calamities. √<br>• It reduces the ability of the soil to store water and nutrients. √<br>• It reduces the amount of viable cropland and exposes the subsoil. √<br>• It pollutes and clogs waterways with sediments. √<br>**Any TWO correct relevant answer** | **2 marks=** 2 negative impacts of soil erosion mentioned<br>1 **marks=** 1 negative impact of soil erosion mentioned<br>**0 mark** = No answer, incorrect or irrelevant answer. | 2 |
| 4.3 | • Plant trees on barren lands to limit erosion of soil. √√<br>• Add mulch and rocks to prevent the plants and grass underneath to prevent soil erosion. √√<br>• Mulch matting can be used to reduce erosion on slopes. √√<br>• Put a series of fibre logs to prevent any water or soil from washing away. √√<br>• Plant vegetation with deep roots that help to hold the soil in place. √√<br>• **Any TWO correct relevant answer** | **4 marks =** mentioned 2 measures that can be put in place to combat soil erosion.<br>**2 marks =** mentioned 1 measures that can be put in place to combat soil erosion.<br>**0 mark** = No answer, incorrect or irrelevant answer | 4 |
| | | | **[8]** |

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**SECTION B**

| NO | Expected answer | Clarification | Mark |
|---|---|---|---|
| Question 5 | | | |
| 5.1 | | | |
| 5.1.1 | Non-renewable resources√ | **One** correct answer. | 1 |
| 5.1.2 | Sustainability √ | **One** correct answer. | 1 |
| 5.1.3 | Biodegradable substances √ | **One** correct answer. | 1 |
| 5.1.4 | Food security √ | **One** correct answer. | 1 |
| 5.1.5 | Carbon footprint √ | **One** correct answer. | 1 |
| | | | **[5]** |
| 5.2 | | | |
| 5.2.1 | Overgrazing it is a process that occurs **when plants are exposed**√ to **intensive grazing for extended periods of time**√, or without enough recovery periods. | **2 marks =** learner showed understanding of the term<br><br>1 **mark =** learners partially showed understanding of the term<br><br>**0 mark** = No answer, incorrect or irrelevant answer | 2 |
| 5.2.2 | • Soil Erosion√<br>• Land degradation√<br>• Loss of Valuable Species√<br>• Food Shortage/Famine √<br>• Death of People and Livestock √ | **2 marks =** learner mentioned TWO negative impacts of over-grazing<br><br>1 **mark =** learner mentioned ONE negative impact of over-grazing<br><br>**0 mark** = No answer, incorrect or irrelevant answer | 2 |
| 5.2.3 | Overfishing is the **removal of a species of fish** (i.e. fishing) from a **body of water at a rate greater than that the species can replenish its** population naturally. √√ | **2 marks** = Concept fully defined **OR** bolded words mentioned on the answer.<br>**1 mark** = Mentioned **one** bolded word<br><br>**0 mark** = No answer, incorrect or irrelevant answer. | 2 |
| 5.2.4 | • Lack of resources to enforce legislation. √<br>• Lack of oversight. √<br>• Lack of understanding of fish populations√<br>• Lack of protection of coastal areas. √ | **2 marks =** learner mentioned TWO causes of over-fishing | 2 |

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1 **mark =** learner mentioned ONE causes of over-fishing

**0 mark** = No answer, incorrect or irrelevant answer

**Any TWO correct relevant answer**

5.2.5
- When too many fish are taken out of the ocean it creates an imbalance that can erode the food web and lead to a loss of other important marine life, including vulnerable species like sea turtles and corals. √√
- Demand for fish continues to increase around the world, and that means more businesses and jobs are dependent on dwindling stocks. √√
- (c) Overfishing is devastating for coastal and ocean ecosystems as well as the communities that rely on fishing as a source of income. Other problems associated with overfishing are: The eradication of marine and coastal life, many coastal birds, seals, other fish species and ocean mammals rely on fish for survival. √√

**2 marks =** Learner gave description of effects of over-fishing on people and the environment

**0 mark** = No answer, incorrect or irrelevant answer

2

**Any ONE correct relevant answer**

5.2.6 a) Sustainable farming reduces the need for the use of non-renewable energy resources. √

**1 marks =** Learner explained how each factor can prevent resources to be used unsustainably

1

(b) Waste reduction, recycling, or reuse not only relieves pressures on natural resources and virgin materials, but also helps solve waste disposal and treatment problems for customers and communities. √

**1 marks =** Learner explained how each factor can prevent resources to be used unsustainably

1

**[12]**

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| NO | Expected answer | Clarification | Mark |
|---|---|---|---|
| Question 6 | | | |
| 6.1 | Food security It is when all people, at all times, **have physical and economic access to sufficient safe and nutritious food**√ that meets their **dietary needs and food preferences for an active and healthy life**√. | **2 marks** = Concept fully defined **OR** bolded words mentioned on the answer.<br>**1 mark** = Mentioned **one** bolded word<br>**0 mark** = No answer, incorrect or irrelevant answer. | 2 |
| 6.2 | Subsistence farming √ | **One** correct answer. | 1 |
| 6.3 | Maize √ | **One** correct answer. | 1 |
| 6.4 | The people in the photograph are farming to produce maize and maize can produce a lot of meals, so if there is enough maize food in terms of maize will be secured. √√<br>**Accept ANY correct relevant answer** | **2 marks** = learner showed understanding of how people help to contribute to food security<br>**0 mark** = No answer, incorrect or irrelevant answer | 2 |
| 6.5 | A technology is deemed to be appropriate when it is compatible with local, cultural, and economic conditions (i.e., the human, material and cultural resources of the economy), and utilizes locally available materials and energy resources, with tools and processes maintained and operationally controlled by the local. √√<br>**Accept ANY correct relevant answer** | **2 marks** = learner used the photograph explain the concept of appropriate technology.<br>**0 mark** = No answer, incorrect or irrelevant answer | 2 |
| | | | **[8]** |
| Question 7 | | | |
| 7.1 | Genetic modification of crops it is the process that involves adding a specific **stretch of DNA into the plant's genome**√, giving it **new or different characteristics**. √ | **1 mark** = Mentioned **one** bolded word<br>**0 mark** = No answer, incorrect or irrelevant answer | 1 |
| 7.2 | The cartoonist it is indicating that genetic modification of crops it is good because the other cartoon as a form of plant it looks alive because it has been genetically modified while the other one doesn't look alive hence it needs to be genetically modified. √√ | **2 marks** =given for motivation of genetic modification of crops as being good or bad<br>**1 mark** = learner mentioned one word which might be | 2 |

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clear with no explanation

**0 mark** = No answer, incorrect or irrelevant answer

**Accept ANY correct relevant answer**

7.3
- Genetic modification can artificially increase the vitamin content of plants, making them healthier and more nutritious. √
- Genetic modification can help to reduce world poverty, hunger and disease. √
- Farmers can save money on pesticides because seeds can be modified to resist specific pests. √
- Poor quality land can be planted with crops that have been genetically modified to grow in certain conditions e.g. salty soil. √

**2 mark** Learner listed 2 advantages of genetically modified crops — 2

**1 mark** Learner listed 1 advantages of genetically modified crops

**0 mark** = No answer, incorrect or irrelevant answer

**Any TWO correct relevant answer**

7.4
- Eating foods from genetically modified crops may not be safe as scientists do not know how the seeds will change over time. √√
- After genetically modified seeds had been introduced into an area, they may contaminate ordinary varieties of the same plant. This could wipe out older varieties of plants. √√
- In time, pests and disease may be able to invade the new crops. They could be expensive and difficult to control √√
- Big companies that produce genetically modified seeds charge high prices, which poor farmers cannot afford. √√

**2 marks** = Learner listed TWO disadvantages of genetically modified crops — 2

**1 mark** Learner listed One dis advantages of genetically modified crops

**0 mark** = No answer, incorrect or irrelevant answer

**Any TWO correct relevant answer**

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| | Scoring Rules | Clarification | Marks |
|---|---|---|---|
| 7.5 | ▪ Introductory / controlling sentence: a way of evaluating the advantages and disadvantages of using science and technology to increase food production. ✓<br><br>Advantages<br>• The advantages of using science and technology may include productivity being boosted by technology √<br>• Farmers work more effectively and efficiently√<br>• farmer's workload being reduced by technology √<br>• can help cut cost and increase profit√<br>• modern technology makes transportation of products easy √<br>• technology increases trading and business√<br>• water supply becomes easy by using modern technology √<br><br>Disadvantages<br>• excessive use of fertilizers and pesticides make plants suffer from negative side effects √<br>• too much technology reduces fertility in the soil<br>• unemployment caused by practice of fertilizers and pesticides√<br>• lack of education among farmers on the use of technology√<br>• High maintaining costs of using technology √<br>• Usage of technology can harm human beings ,other living creatures and the environment√<br>• It can strip away many nutrients found in fresh food√<br>• Processed food contain added chemicals and preservatives which can harm our health√<br><br>▪ Concluding sentence: own opinion on a way of evaluating the advantages and disadvantages of using science and technology to increase food production.✓ | Any of the 6 answers provided<br><br>**And**<br><br>Introductory and concluding sentences<br><br>Accept any other correct and relevant answers not listed | 8 |

| Clarification | Marks |
|---|---|
| Has introductory/ controlling sentence.<br>Has all 6 facts expected.<br>Has concluding sentence. | 8 |
| Has either introductory/ controlling sentence or concluding sentence.<br>Has all 6 facts expected.<br>**OR**<br>Has introductory and concluding sentence.<br>Has 5 expected facts. | 7 |

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| | |
|---|---|
| No introductory/ controlling sentence or concluding sentence.<br>Has all 6 facts expected.<br>**OR**<br>Has introductory/ controlling sentence and concluding sentence.<br>Has 4 of expected facts.<br>**OR**<br>Has introductory/ controlling sentence or concluding sentence.<br>Has 5 of expected facts. | 6 |
| No introductory/ controlling sentence or concluding sentence.<br>Has 5 of the expected 6 points.<br>**OR**<br>Has an introductory/ controlling sentence and a concluding sentence.<br>Has 4 of the 6 points expected. | 5 |
| No introductory/ controlling sentence or concluding sentence.<br>Has 4 of the 6 expected facts.<br>**OR**<br>Has introductory/ controlling sentence and concluding sentence.<br>Has 2 of the 6 expected facts.<br>**OR**<br>Has introductory/ controlling sentence or concluding sentence.<br>Has 3 of the expected fact. | 4 |
| No introductory/ controlling sentence and concluding sentence.<br>Has 3 of the 6 expected facts.<br>**OR**<br>Has introductory/ controlling sentence and concluding sentence.<br>Has 1 of the expected facts.<br>**OR**<br>Has introductory/ controlling sentence or concluding sentence.<br>Has 2 of the expected facts. | 3 |
| Has 2 of the 6 expected facts.<br>**OR**<br>Has introductory/ controlling sentence or concluding sentence.<br>Has 1 of the expected facts. | 2 |
| Has 1 of the 6 expected facts | 1 |
| Question not answered at all.<br>Incorrect or irrelevant responses. | 0 |