



THE UNITED REPUBLIC OF TANZANIA
MINISTRY OF EDUCATION, SCIENCE AND TECHNOLOGY
NATIONAL EXAMINATIONS COUNCIL OF TANZANIA



**CANDIDATES' ITEM RESPONSE ANALYSIS
REPORT ON THE CERTIFICATE OF SECONDARY
EDUCATION EXAMINATION (CSEE) 2025**

AGRICULTURE



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034 AGRICULTURE

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TABLE OF CONTENTS

FOREWORD	iv
1.0 INTRODUCTION.....	1
2.0 THE ANALYSIS OF THE CANDIDATES' PERFORMANCE ON EACH QUESTION.....	2
2.1 034/1 AGRICULTURE 1	3
2.1.1 Question 1: Multiple-Choice Items	3
2.1.2 Question 2: Matching Item.....	10
2.1.3 Question 3: Crop Husbandry	12
2.1.4 Question 4: Soil Productivity	17
2.1.5 Question 5: Principles of Crop Production.....	22
2.1.6 Question 6: Principles of Livestock Production.....	26
2.1.7 Question 7: Factors of Production.....	30
2.1.8 Question 8: Agricultural Marketing	33
2.1.9 Question 9: Principles of Crop Production.....	37
2.1.10 Question 10: Contemporary Issues in Agriculture	41
2.1.11 Question 11: Introduction to Soil Science.....	47
2.2 034/2 AGRICULTURE 2	53
2.2.1 Question 2: Introduction to Soil Science.....	53
3.0 THE ANALYSIS OF THE CANDIDATES' PERFORMANCE ON EACH TOPIC	61
4.0 CONCLUSION AND RECOMMENDATIONS.....	62
4.1 Conclusion	62
4.2 Recommendations.....	63
Appendix: Candidates Performance in Various Topics in 034 Agriculture in CSEE 2025.....	65

FOREWORD

This report provides the Candidates' Item Response Analysis (CIRA) on the performance of candidates who sat for the 2025 Certificate of Secondary Education Examination (CSEE) in Agriculture. Its purpose is to offer constructive feedback to education stakeholders by highlighting the key factors that influenced candidates' achievement in the subject.

The CSEE is administered as a summative assessment at the end of four years of secondary education. It evaluates the extent to which learners have attained the intended knowledge, competencies, and practical skills, while also serving as a measure of the overall effectiveness of the education system. In addition, the examination performs a selection role by identifying high-achieving candidates for progression to advanced secondary education and other institutions of further learning.

Performance data show that a large proportion of candidates obtained higher grades (A, B, and C), whereas a smaller proportion attained lower grades (D and F). This report therefore analyses the underlying reasons for both strong and weak performance in the 2025 examination. Good performance was largely linked to a solid grasp of subject concepts and satisfactory practical competence. Conversely, weaker performance was mainly associated with limited understanding, misinterpretation of concepts, and insufficient practical skills.

The National Examinations Council of Tanzania (NECTA) anticipates that the insights presented in this report will help stakeholders recognize existing challenges and guide the development of appropriate strategies to improve the teaching and learning of Agriculture.

The Council sincerely appreciates the dedication and contributions of all examination officers, examiners, and everyone involved in the preparation of this report.



Prof. Said Ally Mohamed
EXECUTIVE SECRETARY

1.0 INTRODUCTION

This report presents an analysis of candidate performance in the 2025 Certificate of Secondary Education Examination (CSEE) for the Agriculture subject. The examination was administered in accordance with the 2022 Examination Format and the Agriculture Syllabus published in 2019.

The examination comprised two papers: 034/1 Agriculture 1 (Theory) and 034/2 Agriculture 2 (Practical). The theory paper had a duration of three (3) hours and was divided into three sections: A, B, and C, with a total of eleven questions. Candidates were required to attempt all questions in Sections A and B, and any two questions from Section C.

Section A contained two objective questions. Question one included ten multiple-choice items, each worth one (1) mark, totaling 10 marks. Question two comprised six matching items, each carrying one (1) mark, making a total of six (6) marks. The section carried a total of 16 marks. Section B consisted of six short-answer questions, each worth nine (9) marks, contributing a total of 54 marks. Section C included three essay-type questions, each carrying 15 marks, bringing the total weight of the paper to 100 marks.

The practical paper of 2 hours and 30 minutes consisted of two short-answer questions, each worth 25 marks. Candidates were required to answer all the questions. The total score for the paper was 50 marks.

A total of 9,723 candidates registered for the 2025 Certificate of Secondary Education Examination in Agriculture, of whom 9,555 (98.27%) sat for the examination. According to the performance statistics (Table 1), 9,052 (94.81%) candidates passed, while 496 (5.19%) failed. Overall, the general performance in the subject was good.

Table 1 further compares candidates' performance in Agriculture between 2024 and 2025. The pass rate slightly declined from 95.01 per cent in 2024 to 94.81 per cent in 2025, indicating a marginal decrease of 0.20 per cent. Despite this small decline, the overall performance trend remains consistently high.

Table 1: Candidates' Performance in CSEE 2024 and 2025

Year	Grades	A	B	C	D	F	With held	Total	Pass
2024	Female	25	190	2,030	1,460	253	1	3,959	95.01%
	Male	92	372	2,524	1,013	152	5	4,158	
	Total	117	562	4,554	2,473	405	6	8,117	
2025	Female	50	247	2,231	1,740	351	5	4,624	94.81%
	Male	124	510	2,942	1,208	145	2	4,931	
	Total	174	757	5,173	2,948	496	7	9,555	

Source: NECTA Statistics Book, **pg. 7**, CSEE (2025)

Table 1 shows that the number of candidates increased in 2025 compared to 2024. Despite this increase, the percentage distribution of both higher and lower grades changed only marginally. The slight reduction in the proportion of candidates attaining higher grades suggests a minor decline in overall performance; however, this does not indicate a substantial drop in standards. Overall, performance across the two years remains largely stable and comparable, with many candidates consistently achieving grades A to C.

Candidates' performance is categorized into five grades: A, B, C, D, and F, each corresponding to a specific score range and performance level: A (75 - 100): Excellent, B (65 - 74): Very Good, C (45 - 64): Good, D (30 - 44): Satisfactory, and F (0 - 29): Fail.

The subsequent sections of this report provide a detailed analysis of candidates' performance by question and topic, followed by a conclusion and recommendations.

2.0 THE ANALYSIS OF THE CANDIDATES' PERFORMANCE ON EACH QUESTION

This section presents an analysis of candidates' performance on each question. The description focuses on the question's requirements, candidates' performance, and the reasons for the observed performance levels. Extracts from sampled candidates' scripts showing examples of correct and incorrect responses, as well as graphical illustrations, are provided for reference.

For easier interpretation, performance is categorized into three levels: Good (65–100), Average (30–64), and Weak (0–29). To visually represent these categories, three colors are used: green for good performance, yellow for average performance, and red for weak performance.

2.1 034/1 AGRICULTURE 1

2.1.1 Question 1: Multiple-Choice Items

The question comprised ten items drawn from the following topics: *Agricultural Development in Tanzania*, *Introduction to Crop Production*, *Introduction to Soil Science*, *Introduction to Agriculture*, *Mechanization in Agriculture*, *Soil Productivity*, *Introduction to Livestock Production*, *Crop Husbandry*, *Fundamentals of Farm Management*, and *Principles of Crop Production*. Candidates were required to select the correct response from the five given alternatives and write its corresponding letter next to the item number in the provided answer booklet.

The question was attempted by all 9,555 (100%) candidates. Among them, 1,757 (18.39%) scored between 0.0 and 2.0 marks, 7,008 (73.34%) scored between 3.0 and 6.0 marks, and 790 (8.27%) scored between 7.0 and 10.0 marks. Figure 1 presents the distribution of candidates' scores for this question.

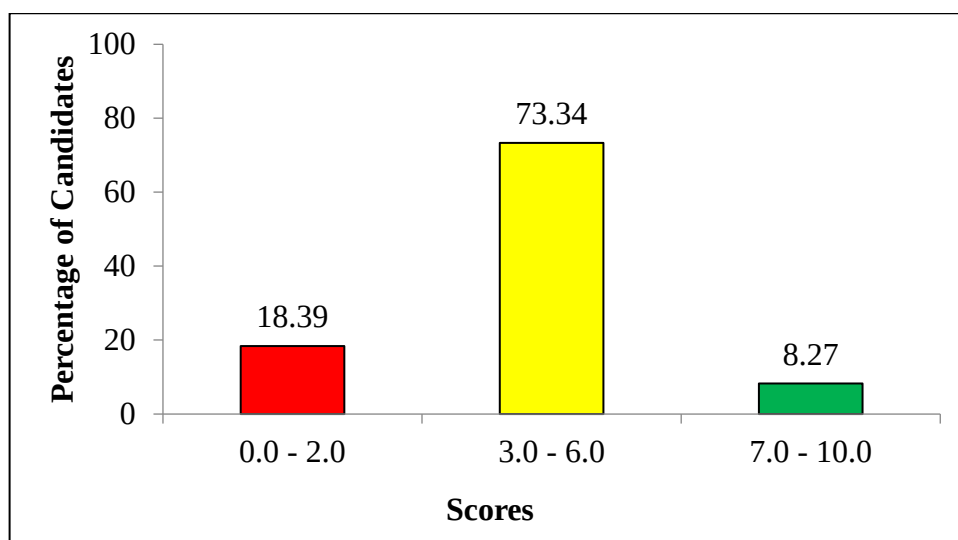


Figure 1: *Candidates' Performance on Question 1*

With respect to Figure 1, 81.61 per cent of the candidates scored between 3.0 and 10.0 marks, while 18.39 per cent scored between 0.0 and 2.0 marks. Overall, the performance on the question was good.

The analysis of the candidates' responses revealed that most of the candidates provided correct answers to items (ii), (iii), (iv), (v), (vi), (vii), (ix), and (x), while incorrect responses were common for items (i) and (viii). A detailed analysis of the candidates' responses to each item is presented as follows:

- (i) The laboratory investigation done on round potatoes wounds indicated that, tubers produced white juice upon squeezing. Which type of a disease would you conclude that has been affecting the plants?
- | | | | | | |
|---|-------------|---|---------------|---|----------------|
| A | Late blight | B | Early blight | C | Bacterial wilt |
| D | Mosaic | E | Viral disease | | |

The item assessed candidates' understanding of plant diseases and their symptoms. The correct answer was C (Bacterial wilt) because the production of white milky ooze from infected tubers is a typical symptom of bacterial wilt disease.

Most candidates selected the incorrect option B (Early blight), indicating confusion between bacterial and fungal disease symptoms. This option is incorrect as it presents concentric leaf spots.

Other distractors were: A (Late blight): Incorrect because it causes water-soaked lesions and rotting rather than white exudate. D (Mosaic): Incorrect since it causes leaf discoloration and curling. E (Viral disease): Incorrect because viral symptoms involve mottling and stunting rather than ooze. The incorrect choices suggest weak diagnostic skills in plant pathology.

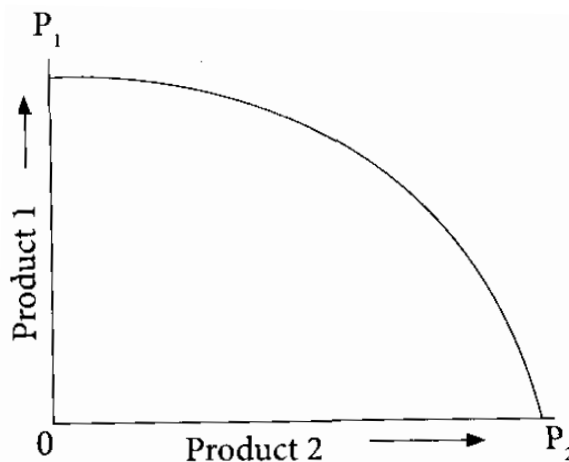
- (ii) In Tanzania, land tenure can be grouped into different categories. Which one can be given to an individual, a married couple or a group of people?
- | | | | | | |
|---|----------|---|-------------|---|-------------|
| A | Communal | B | Open access | C | State owned |
| D | Private | E | Government | | |

This item tested candidates' knowledge of the land tenure system in Tanzania. The correct answer was D (Private) because private tenure allows

land to be legally owned and controlled by an individual, a married couple, or a group of people. Most candidates chose the correct option indicating good understanding of the land ownership systems.

The other options were incorrect for the following reasons: A (Communal): This refers to land owned and used collectively by the community as a whole, not by specific individuals or small identified groups. Therefore, it cannot be allocated to a particular person, couple, or defined group for private ownership. B (Open access): This type of land has no specific ownership or control and is accessible to everyone. Since it is not owned by any person or group, it cannot be formally given to individuals or couples. C (State owned): This land is owned and managed by the government on behalf of the public. Individuals may only use it through permits or leases, but they do not have ownership rights. E (Government): Similar to state-owned land, this category is controlled by government authorities for public purposes and cannot be privately owned by individuals or groups.

(iii) On deciding what to produce, a farm manager has to consider the relationship among products. What kind of product relationship does the following figure illustrate?



- | | |
|-------------------------------|--------------------------|
| A Joint products | B Complementary products |
| C Supplementary products | D Competitive products |
| E Mutually exclusive products | |

This item tested candidates' understanding of product-product relationships in farm management. The correct answer was D (Competitive products)

because competitive products use the same limited resources such as land, labour, and capital; therefore, increasing the production of one product reduces the production of the other. A considerable number of candidates opted for the correct answer implying good understanding of how the production of one enterprise affects another.

The other options were incorrect for the following reasons: A (Joint products): These are products produced together from the same process and cannot be easily separated, such as milk and cream. The figure did not show joint production. B (Complementary products): These products support each other, such that increasing the production of one leads to an increase in the other. This relationship was not illustrated. C (Supplementary products): These make use of idle resources and do not affect the main enterprise. The relationship shown was not supplementary. E (Mutually exclusive products): These products compete for the same resources and cannot be produced together. However, the figure suggested that the enterprises could still be produced simultaneously, which contradicts mutual exclusivity.

(iv) Which set represents the crops grown for the production of aromatic substances for food flavouring?

(i) Cloves

(ii) Roses

(iii) Ginger

(iv) Tomatoes

(v) Cinnamon

A (i), (ii) and (v) B (ii) and (iv) C (i), (iii) and (v)

D (iii) and (iv) E (i), (ii) and (iii)

This item tested candidates' knowledge of the types of crops. The correct answer was C ((i), (iii) and (v)) because cloves, ginger, and cinnamon are spices commonly grown for their aromatic substances used in food flavouring. Most of the candidates chose the correct alternative showing possession of adequate knowledge and skills of spice crops.

The other options were incorrect for the following reasons: A: Includes roses, which are mainly ornamental and not commonly used as food flavouring crops. B: Contains tomatoes, which are vegetables and not aromatic spices. D: Includes tomatoes, which are not used for flavouring as spices and E: Includes roses, which are not classified as spice crops.

- (v) Soil profile is made up of different horizons. Which one contains very little soil that lacks structure?
- A Horizon "O" B Horizon "A" C Horizon "B"
D Horizon "C" E Horizon "R"

This item tested candidates' knowledge of soil horizons and their characteristics. The correct answer was E (Horizon "R") because this horizon consists of hard bedrock with very little or no soil and lacks soil structure. Most candidates chose the correct option indicating good mastery of the subject matter.

The other options were incorrect for the following reasons: A (Horizon "O"): Contains organic matter and decomposed litter. B (Horizon "A"): Topsoil rich in humus and supports plant growth. C (Horizon "B"): Subsoil with clay and mineral accumulation. D (Horizon "C"): Contains weathered parent material and some soil particles, not bare rock.

- (vi) In early and modern times, agriculture has been considered important. Which one among the following serves in both times?
- A Basis for research B Source of income
C Creating employment D Source of foreign exchange
E Source of food

This item tested candidates' understanding of the general and continuous importance of agriculture throughout history. The correct answer was E (Source of food) because agriculture has always been a source of food for human survival in both early and modern times. A large proportion of candidates chose correct answer indicating good understanding of the importance of agriculture.

The other options were incorrect for the following reasons: A: (Research) is mainly associated with modern agriculture. B: (Income generation) was not the primary role in early subsistence agriculture. C: (Employment) is more significant in modern economic systems. D: (Foreign exchange) applies mainly to modern commercial agriculture.

- (vii) In areas where coffee is grown, farmers are advised to have tools for removing excessive branches which are less or not productive. Which tools would you advise farmers to possess in order to perform the task?

- | | | | | | |
|---|--------|---|-----------|---|---------|
| A | Shears | B | Secateurs | C | Sickles |
| D | Forks | E | Slashers | | |

This item tested candidates' knowledge of the use of farm tools. The correct answer was B (Secateurs) because secateurs are specifically designed for pruning small branches accurately and safely. Many candidates opted for the correct answer signifying good mastery of the knowledge and skills of pruning tools.

The other options were incorrect for the following reasons: A (Shears): Mainly used for trimming hedges and grasses, not woody branches. C (Sickles): Used for harvesting crops or cutting grass. D (Forks): Used for digging or handling manure. E (Slashers): Used for clearing bushes and weeds, not pruning branches.

(viii) Moisture is an important requirement for plant growth. At what stage of growth in maize plants it is critically needed?

- | | | | |
|---|----------------------------------|---|-------------------|
| A | Silking and tasseling | B | Root enlargement |
| C | Flowering and panicle initiation | D | Vegetative growth |
| E | Crown root initiation | | |

The item assessed candidates' understanding of the moisture requirements at different plant developmental phases. The correct answer was A (Silking and tasseling) because this is the reproductive stage when pollination and fertilization occur, and adequate moisture is essential for silk emergence, pollen viability, and kernel formation. Moisture stress at this stage can significantly reduce grain set and yield.

Most candidates selected the incorrect option D (Vegetative growth), indicating a general misconception that water is most important only during leaf and stem development. This option is incorrect because, although moisture supports vegetative growth, stress at this stage has less impact on final yield compared to the reproductive stage.

Other distractors were: B (Root enlargement): Incorrect because maize does not have a distinct root enlargement stage that critically determines yield. C (Flowering and panicle initiation): Incorrect since panicle initiation is associated with crops such as rice and sorghum, not maize. E (Crown root initiation): Incorrect because crown roots develop early to support plant establishment, but this stage is less sensitive to moisture stress than silking

and tasseling. The incorrect choices suggest limited understanding of maize growth stages and the relationship between moisture stress and yield.

- (ix) During dry seasons, cattle suffer from shortage of feeds. Which forms of feed conservation would you advise the farmers to practice to address the problem?
- (i) Concentrate
 - (ii) Hay
 - (iii) Succulent
 - (iv) Silage
 - (v) Roughage
- A (i) and (iii) B (ii) and (iv) C (i) and (v)
D (ii) and (iii) E (iv) and (v)

This item tested candidates' knowledge and skills of the methods of conserving livestock feeds. The correct answer was B ((ii) and (iv)) because hay and silage are the main methods used to preserve pasture and fodder for use during dry seasons. A large proportion of candidates chose the correct option showing competence in the methods of conserving livestock feeds.

The other options were incorrect for the following reasons: A: Concentrates and succulents are not preservation methods. C: Concentrates and roughage are feed types, not conservation methods. D: Succulents are fresh feeds and cannot be stored for long periods. E: Roughage refers to feed type rather than preservation technique.

- (x) Why is phosphorus essential for plant growth and development?
- A Promotes the formation of roots
 - B Promotes the formation of chlorophyll
 - C Is essential for normal cell division
 - D Regulates the uptake of potassium by plants
 - E Acts as a detoxifying agent

This item tested candidates' knowledge of functions of plant nutrients. The correct answer was C (Is essential for normal cell division) because phosphorus plays a key role in energy transfer (ATP) and cell division, which supports plant growth and development. Most candidates chose the correct answer demonstrating good understanding of the function of phosphorus in plants.

The other options were incorrect for the following reasons: A (Promote the formation of roots): is incorrect because root formation is mainly promoted by auxins and other nutrients, not specifically phosphorus. B (Promote formation of chlorophyll): Incorrect because chlorophyll formation is mainly associated with nitrogen and magnesium. D (Regulate the uptake potassium by plants): Incorrect because potassium uptake regulation is not the primary function of phosphorus. E (Act as detoxifying agent): Incorrect because detoxification is not a major role of phosphorus in plants.

2.1.2 Question 2: Matching Item

This question consisted of six items drawn from the topic Principles of Livestock Production. Candidates were required to match the items in List A with the corresponding responses in List B by writing the letter of the correct answer beside each item number in the answer booklet. List A contained descriptions of functions performed in various sections of the abattoir, while List B comprised the names of those sections. The question assessed candidates' knowledge and understanding of abattoir layout, equipment, and the specific functions of each slaughter facility.

List A	List B
(i) A corridor where the animal is driven to enter in the stunning box.	A Slaughter platform B Bleeding rail
(ii) A facility in which the animal is made unconscious by electrical shock to minimize the pain of slaughter.	C Stunning box D Skinning cradle E Entry race F Dressing rail
(iii) An area attached to the stunning box onto which an unconscious animal falls on ready for the throat to be severed.	G Cold room H Inspection box
(iv) A section where the carcass is held to allow for bleeding.	
(v) A section on which the opening cuts are made ready for skin removal.	
(vi) An area where the carcass is lifted off the ground for flaying process to be completed.	

The question was attempted by all 9,555 (100%) candidates, of whom 1,858 (19.45%) scored between 0.0 and 1.0 mark, 4,148 (43.40%) scored between 2.0 and 3.0 marks, and 3,549 (37.15%) scored between 4.0 and 6.0 marks. The general performance on the question was good. Figure 2 illustrates the distribution of candidates' scores for this question.

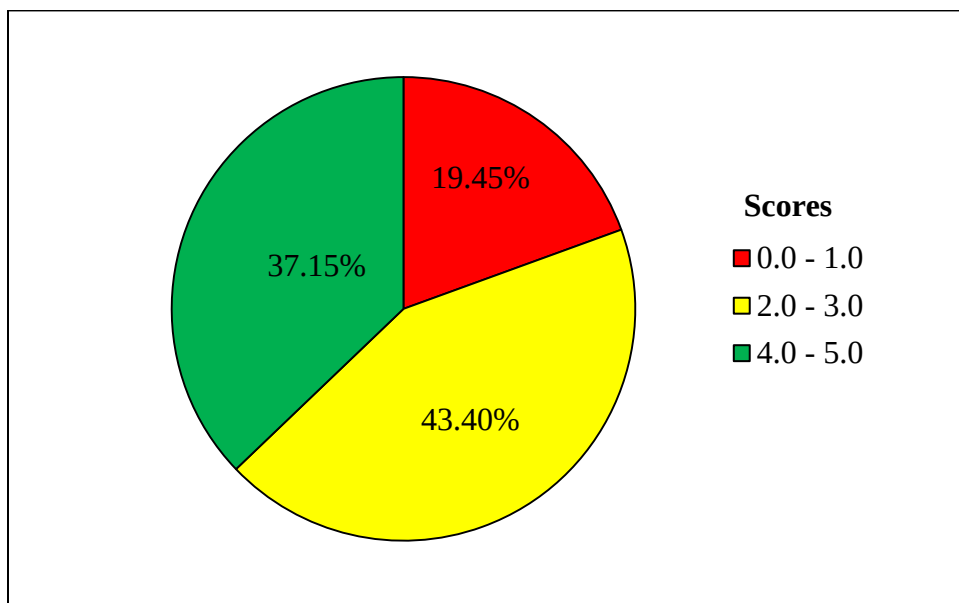


Figure 2: *Candidates' Performance on Question 2*

Further analysis of the candidates' responses revealed that items (ii), (iii), (iv), and (v) were correctly attempted by most candidates, whereas items (i) and (vi) were incorrectly answered by many candidates. This indicates that candidates had a moderate understanding of the main slaughtering and dressing operations but experienced difficulties identifying some structural components and their specific roles. A detailed item-by-item analysis is presented below:

Item (i) required candidates to identify the part described as *a corridor where the animal is driven to enter the stunning box*. The correct response was E (Entry race). Most candidates selected incorrect responses, suggesting confusion between the entry race and other operational areas such as the slaughter platform or stunning box. This indicates inadequate understanding of the animal handling and movement pathway before stunning.

Item (ii) required candidates to match *the facility where the animal is made unconscious by electrical shock to minimize pain during slaughter*. The correct response was C (Stunning box). A considerable number of candidates answered correctly, demonstrating a good understanding of humane slaughter practices and the function of the stunning box.

Item (iii) required candidates to identify *the area attached to the stunning box onto which the unconscious animal falls ready for the throat to be severed*. The correct response was A (Slaughter platform). Most candidates provided the correct answer, indicating adequate knowledge of the immediate post-stunning procedures and the function of the slaughter platform.

Item (iv) required candidates to match the section where *the carcass is held to allow for bleeding*. The correct response was B (Bleeding rail). A large proportion of candidates answered correctly, showing a clear understanding of the bleeding process and the role of the bleeding rail in proper blood drainage.

Item (v) required candidates to identify *the section on which the opening cuts are made ready for skin removal*. The correct response was D (Skinning cradle). Most candidates selected the correct answer, indicating sufficient knowledge and skills regarding the preparation of the carcass for flaying.

Item (vi) required candidates to match *the area where the carcass is lifted off the ground for the flaying process to be completed*. The correct response was F (Dressing rail). However, many candidates selected incorrect options, possibly confusing the dressing rail with the bleeding rail or skinning cradle. This suggests limited understanding of the later stages of carcass dressing and the sequence of operations within the abattoir.

2.1.3 Question 3: Crop Husbandry

Low production of tomatoes might be a result of failure to properly manage the crop seedlings in the nursery. What would you advise on the management of the seedlings? Give nine points. The question tested the candidates' understanding of management practices of tomato seedlings.

The question was attempted by all 9,555 (100%) candidates, among them 3,847 (40.26%) scored between 0.0 and 2.5 marks, 4,108 (42.99%) scored

between 3.0 and 5.5 marks, and 1,600 (16.75%) scored between 6.0 and 9.0 marks. Figure 3 illustrates the distribution of candidates' scores for this question.

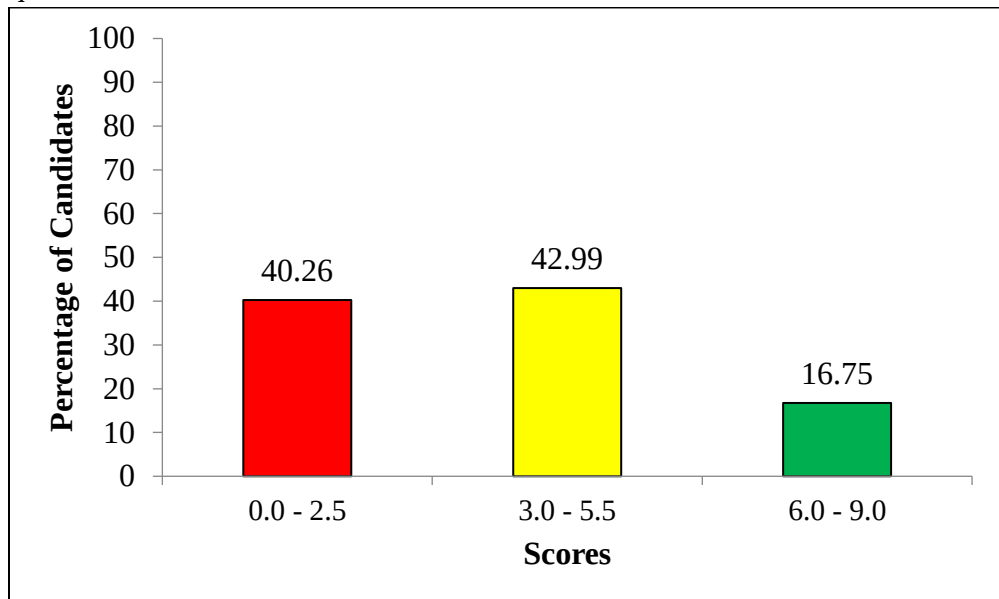


Figure 3: *Candidates' Performance on Question 3*

Figure 3 shows that 59.74 per cent of the candidates scored between 3.0 and 9.0 marks, whereas 40.26 per cent scored between 0.0 and 2.5 marks. Overall, the candidates' performance was average.

The data indicate that 16.75 per cent of the candidates performed well on the question. Most of them were able to advise appropriately on how to manage tomato seedlings in a nursery. They provided correct responses such as *seed drilling, mulching, watering, shading, pricking out, weed control, pest control, disease control, and hardening off*. These responses demonstrate a good mastery of the subject matter. Extract 1.1 presents an example of a candidate's correct responses to the question.

3.	Management Practices of seedlings in a nursery are :	
	i) Irrigation ; is the process of supplying water in a nursery. Seedlings should be irrigated early in the morning or late in the evening. This is in order to reduce the rate of evaporation during a day. Example : irrigation through watering can in tomato nursery .	
	ii) Weeding ; is the process of removing unwanted plants in a nursery. Weeding in tomato nursery can be done to remove weeds such as star grass and wandering jew. Example : weeding can be done by uprooting using hands .	
	iii) Mulching ; is the process of covering the soil layer by using mulches. This helps to avoid excess evaporation and to maintain soil fertility. Example ; in tomato nursery mulching is done by using dry grasses .	
	iv) Pest control ; controlling organisms that harm tomato seedlings is necessary. Pests that harm tomato seedlings are white flies and caterpillar . Pest control is done by spraying pesticides. Example ; Pest control by biological use of chicken to feed on pests .	
	v) Diseases control ; in a nursery, seedlings should be protected from diseases . Diseases lowers quality of crops. Diseases that affect tomatoes are such as streak and blight . Diseases are chemically controlled by medicines such as diazinon and marathion.	
3.	vi) Fertilizer application ; inorganic fertilizers should be supplied to tomato seedlings so as to increase growth rate. Fertilizers adds plants nutrients in the soil. Example of fertilizer is NPK and Urea .	
	vii) Prevention of wind ; in a nursery, the nursery should be surrounded by wind breakers that will protect seedlings from strong winds and fall down. Example of wind breakers in tomato nursery are iron sheets.	
	viii) Provision of shade in a nursery ; the seedlings in a nursery should be protected against direct sunlight. This will prevent drying of tomato seedlings. Example of shading is roofing the nursery by using dry grasses .	
	ix) Fencing the nursery ; the nursery should be fenced so that to avoid theft and animals that would feed on seedlings such as chickens. Examples fencing can be done by using electric fences and wire mesh .	

Extract 1.1: A sample of the candidates' correct responses to Question 3.

Extract 1.1 presents some sample responses from a candidate who performed well on the question, demonstrating a good understanding of the subject matter.

Furthermore, the data show that 42.99 per cent of the candidates demonstrated an average performance on the question. The majority of them failed to provide comprehensive explanations of the management practices for tomato seedlings, while others did not exhaust all the required points. Such responses resulted in average scores. These responses suggest that the candidates had only a partial understanding of the management practices for tomato seedlings.

On the contrary, 40.26 per cent of the candidates performed weakly on the question. Most of them failed to provide appropriate advice on the management practices for tomato seedlings. Instead, some gave general cultural methods for controlling plant diseases, such as *use of crop rotation, deep ploughing, early planting, planting clean seeds, and use of a closed season*. Others mentioned factors to consider when selecting a site for establishing a vegetable garden, including *considering soil characteristics, climate conditions, availability of a reliable water source, and access to markets and transport systems*.

Similarly, a few candidates provided factors related to the physical planning of a vegetable garden, such as *fencing the garden area, establishing windbreaks, constructing irrigation structures, preparing seedbeds, and setting aside a compost area*, which were not relevant to the requirements of the question. Others listed unrelated or incorrect responses, including *application of lime, maintaining proper soil pH, effects of soil erosion, storing seedlings in a store, avoiding the application of manure, and making good decisions*.

These responses indicate inadequate understanding of the subject matter and an inability to relate theoretical knowledge to the specific practical requirements of the question. Extract 1.2 presents an example of an incorrect response to the question.

3/	proper Managements of the Seedlings	
a)	Treating Seeds with immature embryos. → Also this is among the Management practice whereby the seeds with immature embryos should be treated hence through this will increase their productivity	
ai)	Stratification - This is a practice of keeping seeds in a chilling condition hence through this Management practice will facilitate and increase productivity in the farm	
aii)	Counteracting growth inhibitors. - Also this is a management practice of the seed whereby the seed is counteracted with growth inhibitors or chemicals such as Sulphuric acid	
(iv)	Scarification - This is whereby the seed testa or hard testa is softened through various methods such as physical method, chemical method and other methods to soften the hard testa.	
cv)	Seed dressing → This is a management of the seed where by the seed is coated by substance or chemicals like Sulphuric acid. hence this will facilitate growth of the seedlings.	
CVi)	Legume Seed Inoculation → This is a management seed practice where by the seed is coated with an inoculant or strain of right Rhizobium bacteria. hence this will facilitate germination of the seeds	
CVii)	Sprouting. - Also this is a management seed practice - whereby the seed is coated with various chemicals to allow the germination of the seed. hence this is among Management practices for seed	
CViii)	Storing seed at right temperature. → Also this is a management practice of seeds whereby the seeds are needed to be stored at dry places. hence this will facilitate their germination.	

Extract 1.2: A sample of the candidates' incorrect responses to Question 3.

Extract 1.2 presents responses from a candidate who demonstrated a lack of understanding of the subject matter. The candidate provided the method of breaking seed dormancy instead of the management practices for tomato seedlings.

2.1.4 Question 4: Soil Productivity

- (a) For maximum crop yield, the amount of soil organic matter must be maintained at a certain level. How can that be achieved? Give three points.
- (b) If you are asked to determine the quantity and rate of accumulation of organic matter in your school farm's soil, what factors would you consider? Give six points.

The question tested the candidates' understanding of the concept of soil organic matter.

The question was attempted by all 9,555 (100%) candidates, among them 4,111 (43.02%) scored between 0.0 and 2.5 marks, 4,101 (42.92%) scored between 3.0 and 5.5 marks, and 1,243 (14.06%) scored between 6.0 and 9.0 marks. Generally, candidates' performance on the question was average. Figure 4 presents the distribution of candidates' scores for this question.

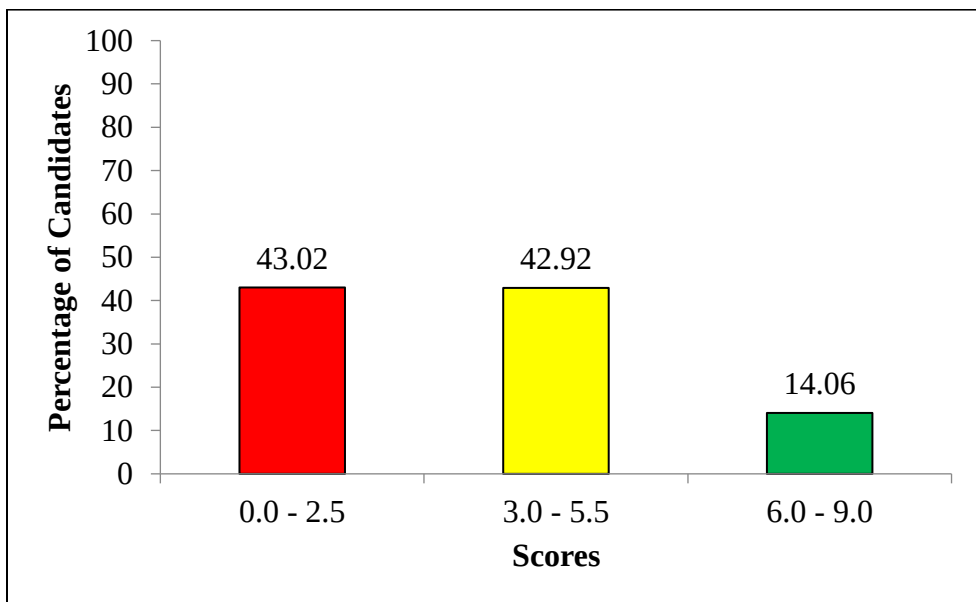


Figure 4: *Candidates' Performance on Question 4*

Data analysis reveals that 14.06 per cent of the candidates performed well on the question. Most of them attempted nearly all parts of the question correctly. In part (a), they correctly stated the methods of maintaining organic matter in the soil. Their responses included: *making frequent additions of organic materials such as compost, farmyard manure, and plant and tree residues; practising green manuring; adopting cropping systems and crop rotation that include crops which add organic matter to the soil; and improving soil through amendment and judicious fertilisation to enhance the management of soil organic matter.*

Similarly, in part (b), the candidates successfully explained the factors to be considered when determining the quantity of organic matter in the soil. Their correct responses included: *nature and amount of organic materials returned, age and chemical composition of the plants, degree of aeration, soil temperature and moisture, topography, fertility status, ecological system, and soil colour.* These responses reflect a strong understanding of soil organic matter. Extract 2.1 presents a sample of correct responses to the question.

4. a)	ways of maintaining organic matter in the soil are ;	
	i) Through green manuring ; green plant remains are left in the field to decompose and become organic matter. Example ; green manuring always involves leguminous plant remains .	
	ii) Through adding organic manures ; adding organic manures from livestock sheds increases organic matter in the soil . Example ; through adding kraal manures and farm yard manures in the farm .	

4.a)	(ii) Through breaking grasses in crop rotation; this is by breaking the plant remains in the soil so that to increase organic matter. Example; maize remains.	
b)	Factors to consider when determining the quantity and rate of accumulation of organic matter are;	
	(i) Topography; refers to the physical appearance of the area. level or flat lands have high accumulation of organic matter due to absence of soil erosion. Example; flat lands have organic matters carried from steep sloped areas.	
	(ii) Degree of aeration; the soil with good aeration has high accumulation of organic matter because microbial activities takes place well. Example; Proper circulation of air facilitates decomposition of organic matter.	
	(iii) Fertility of the soil; the soil with high fertility support plant growth where by at the end plants will die and become organic matters. Example; in equatorial regions there is high accumulation of organic matters.	
	(iv) Soil temperature and moisture; the soil with high temperatures and medium soil moisture has high accumulation of organic matters due to decomposition of organic matters. Example; areas with thick forests.	
	(v) Drainage of an area; areas with water logging are likely to have no high accumulation of organic matters. Example; lack of organic matters due to leaching.	
4.b)	(i) Vegetation cover; the areas with high rate of vegetation cover have high quantity and rate of accumulation of organic matter. Example; thick forests have high accumulation of organic matter.	

Extract 2.1: A sample of the candidates' correct responses to Question 4.

Extract 2.1 presents responses from a candidate who provided correct answers to all parts of the question, thereby demonstrating a sound understanding of organic matter concepts.

Further analysis indicates that 42.92 per cent of the candidates achieved an average performance. Most of them managed to explain how to maintain soil organic matter in part (a) but provided few factors to consider when determining the quantity of organic matter in the soil in part (b). This suggests that the candidates had a partial understanding of the concept of organic matter.

On the other hand, 43.02 per cent of the candidates had a weak performance on the question. The majority provided incorrect responses to nearly all parts of the question. In part (a), they failed to explain how organic matter can be maintained in the soil. Some mistakenly provided the importance of organic matter in the soil, such as *increasing soil fertility, improving soil structure, improving aeration, conserving soil moisture, improving the cation exchange within the soil, improving percolation and supplying food to the microorganisms*, instead of focusing on the methods of maintaining organic matter levels in the soil.

Additionally, several candidates provided a variety of unrelated responses, including *avoid excessive application of organic matter, leads into land pollution, presence of rocks, earth quakes, control soil erosion and provided shelter for micro-organisms*. These responses indicate a clear lack of understanding of the methods for maintaining the level of organic matter in the soil.

Likewise, in part (b), the candidates failed to give the factors to consider when determining the quantity and rate of accumulation of organic matter in the soil. Many provided the factors for soil formation, such as *time, nature of parent materials, living organisms, topography and climate*. Others gave incorrect responses, including *availability of organic matter in the soil, availability of microbes, changes in temperature, presence of pests and diseases* and *presence of trees*, rather than the factors to consider when determining the quantity and availability of organic matter in the soil.

Some candidates also presented the methods by which soil loses fertility, such as *casual burning, weeding, leaching, mono cropping, soil erosion,*

water logging and harvesting of crops. These responses further demonstrate a lack of knowledge about the factors that have to be considered in determining the quantity and accumulation of organic matter in the soil. Extract 2.2 provides a sample of incorrect responses to the question.

4	The following are the points	
i	Because it enables the soil to produce the large crops yield	
ii	Because it control the supply of nutrients to plants, so as to cause to produce large amount of crop yield	
iii	Because it enables to reduce toxicity substances in the soil	
4b	The following are the factors that helps to determine quantity of organic matter to the farm's soil	
i	It should be available -The organic matter should be available so as to easy getting for deference purpose in the farm	
ii	It should be require low costs -That enables for the people to use in their farmer	
4biii	It should be condusive to environment -The quantity of organic matter used should have no effect to environment and others	
iv	It should be quality for production of -crop yields should quality to produced	
v	It should be cheap to get -in order to simplify work in the farm, organic matter should be cheap	
vi	It should be accesible -Organic matter should be accesible, so that it take a short time to have to move	

Extract 2.2: A sample of the incorrect responses to Question 4.

Extract 2.2 presents sample responses from a candidate who lacked subject matter knowledge, providing multiple incorrect responses to both parts of the question.

2.1.5 Question 5: Principles of Crop Production

- (a) How do plant diseases affect crop production enterprises? Give four points.
- (b) When planning to apply pesticides to kill certain harmful insects in the field of crops, which five factors should be considered for the application to be effective?

The question assessed the candidates' understanding of the concept of crop pests and diseases control.

The question was attempted by all 9,555 (100%) candidates. Among them, 4,207 (44.03%) scored between 0.0 and 2.5 marks, 4,230 (44.27%) scored between 3.0 and 5.5 marks, and 1,118 (11.70%) scored between 6.0 and 9.0 marks. This indicates that the overall performance on the question was average. Figure 5 illustrates the distribution of candidates' scores for this question.

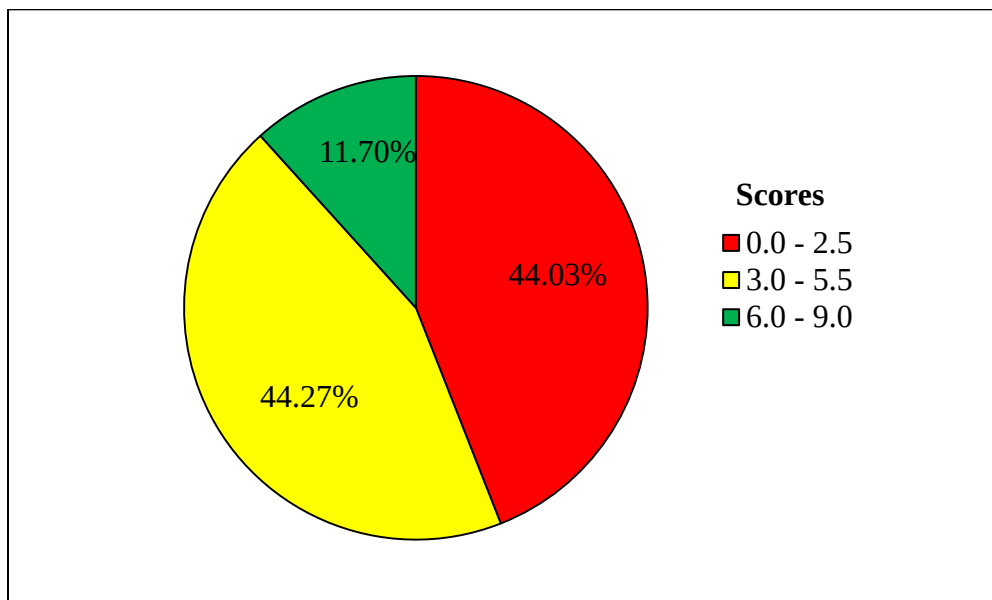


Figure 5: *Candidates' Performance on Question 5*

Performance statistics show that 11.70 per cent of the candidates performed well on the question. Most of them provided correct responses to almost all parts of the question. In part (a), they successfully gave points on how plant diseases affect crop production enterprise. Their responses included: *they decrease crop yield by altering the normal plant physiological processes, interfering with plant growth, or killing it; lower crop quality; some diseases may lead to contamination of crops; diseases to plants can lead to plant death; and disease control increases the cost of production.* These responses illustrate a clear understanding of the effects caused by plant diseases on crop production enterprises.

Likewise, in part (b), the candidates demonstrated their understanding of factors to consider when planning to apply pesticides. The candidates' responses included *concentration, weather conditions at the time of application, time of application, persistence of the pesticide, and pest resistance.* Extract 3.1 presents a responses from a candidate who performed well on this question.

5(a)	i) Crop diseases lowers crop yields; The crop diseases reduce the amount of crop produced per given size of land or number of crop plants. Example smut lowers crop yields in maize and cassava mosaic lowers cassava production.	
	ii) They increase cost of production; This is because the farmer is required to apply various methods of controlling the diseases, for example by buying the pesticides to kill the pests which transmit the disease.	

5(a)	iii) Crop diseases reduce quality of crop products by adding unwanted substances; The unwanted substances cause a bad taste to the consumers and hence reduce the market value of the crops and cause loss to the farmer.	
	(b) i) Concentration of pesticide; This is important when the farmer has to make solution or suspension of pesticides. It should be at correct concentration as dilute pesticides may be less effective in controlling the pests in the field.	
	ii) Time of application; The pesticides should be applied to the stage of development in which pests are more susceptible to pesticides. This is usually in nymphal and larval stage. Adult pests become difficult to be controlled.	
	iii) Weather condition during the time of application; Pesticides should be applied in the field when there is no likely hood of the rain fall. The rain water washes away the pesticides and hence cause ineffectiveness.	
	iv) Persistence of pesticides; The effective pesticide is the one with long residual effect. This means it take longer time before decomposing into constituents which are harmless to pests in the farm.	
	v) Pest resistance; If the pests show resistance to a particular pesticide other pesticides	

5(b)	It should be applied so as to overcome the problem of pest resistance.	

Extract 3.1: A sample of the candidates' correct responses to Question 5.

Extract 3.1 is a sample of correct responses from a candidate who managed to provide correct response to both parts of the question showing good mastery of the concepts of assessed.

The statistics further indicate that 44.27 per cent of the candidates attained an average performance. Most of them were able to suggest the effects of plant diseases and identify the factors to consider when planning to apply pesticides in parts (a) and (b), respectively. However, they failed to explain their points in detail, which limited them to average marks. This suggests inadequate subject matter knowledge.

However, 44.03 per cent of the candidates demonstrated weak performance. The majority were unable to explain how diseases affect crop production in part (a). Instead, some provided the damage caused by insect pests to crops, such as *eating leaves of plants, boring into the stem, eating and boring into young flower buds, eating fruit buds and seeds, eating roots of plants, and sucking juice from plants.*

Others mistakenly listed plant diseases, including *late blight, early blight, mosaic, bacterial wilt, and nematodes*, rather than explaining their effects. Additionally, a number of candidates gave various incorrect responses such as *destroy the embryo of the seeds, spoilage of farm, cause necrosis to the farm produce, due to presence of virus, and presence of pathogens to the environment.* These responses indicate a clear lack of understanding of the effects of plant diseases on crop production.

Furthermore, in part (b), candidates failed to explain the factors to consider when planning to apply pesticides to control harmful insects in crop fields. Instead, the majority provided precautionary rules to observe before and during pesticide application, such as *apply the chemical into the target area of the plant, use the correct dosage, read the manufacturers' instructions, do not smoke or eat during application, and store chemicals carefully and safely.*

Some candidates gave methods of applying fertilizers, which were contrary to the requirements of the question. The incorrect responses included *broadcasting, band application, placement, top dressing, and foliar fertilization*. Others provided unrelated responses such as *size of the farm, the farmer must have knowledge and skills of the pesticides, availability of labour, topography of the area, and type of pest to be killed*. These responses imply a lack of understanding of the factors to consider when planning pesticide application. Extract 3.2 presents a sample of candidates' incorrect responses to Question 5.

a>	i/ lack of pesticides.	
	ii/ Shortage of funds.	
	iii/ lack of poor biological factor.	
	iv/ poor tools or equipment.	
b>	i/ Cultural factor	
	ii/ Biological factor	
	iii/ Chemical factor	
	iv/ Physical factor.	
	v/ Cultural control weeding.	

Extract 3.2: A sample of the candidates 'incorrect responses to Question 5.

Extract 3.2 exemplifies responses from a candidate who lacked adequate subject matter knowledge in both parts of the question, resulting in unrelated responses.

2.1.6 Question 6: Principles of Livestock Production

"Selection of feed materials to use for feeding livestock, is a decision which is determined by certain factors". Justify this statement by giving six points. The question tested the candidates' understanding of livestock feeds and feeding.

The question was attempted by all 9,555 (100%) candidates. Among them, 2,217 (23.20%) scored between 0.0 and 2.5 marks, 5,024 (52.58%) scored between 3.0 and 5.5 marks, and 2,314 (24.22%) scored between 6.0 and 9.0 marks. Overall, the candidates' performance on this question was good. Figure 6 illustrates the distribution of candidates' scores for this question.

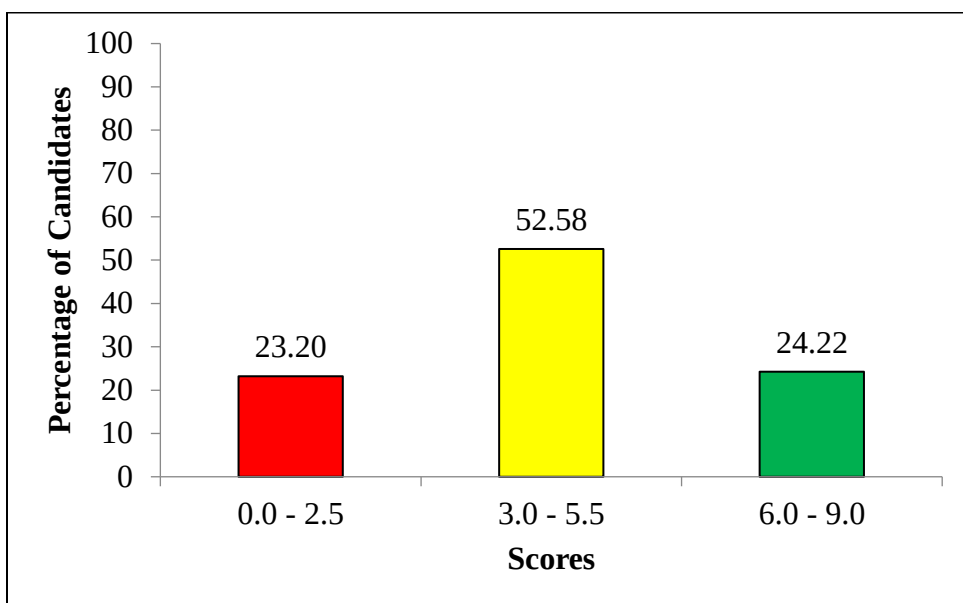


Figure 6: *Candidates' Performance on Question 6*

The candidates who achieved good performance were 24.22 per cent. The majority successfully gave the factors to be considered when selecting a livestock feed. The correct responses included: *nutritional requirement of the animal, nutritional value, cost of feedstuffs, availability, handling and storage, palatability and physical form of the feeds, and anti-nutritional factors*. These responses reflect a good understanding of the factors to consider when selecting feeds for livestock. Extract 4.1 presents an example of responses from a candidate who performed well on this question.

Ob.	The following are the factors to consider when selecting feed materials to feed livestock.	
(i)	Nutritional requirement of the animal.	
⇒	Before selection of feeds, a farmer should consider on what an animal highly need for the growth and survival.	
(ii)	Nutritional value of feeds.	
⇒	A farmer should select feeds which are highly nutritious to the animal for effectiveness and efficiency.	
(iii)	Cost of feeds.	
⇒	A farmer should acquire feeds in accordance to his/her financial capacity and cost of the feeds so as to maximize profit and quality.	
(iv)	Anti-nutritional factors.	
⇒	Before selecting feeds, a farmer should ensure that there are no anti-nutritional factors such as mycotoxins which will harm the livestock instead of making them grow well.	
(v)	Physical forms of feeds.	
⇒	The feeds in which a farmer is going to select should be in a consumable form meaning that where necessary they should be processed for easy consumption by livestock.	
(vi)	Type of animal.	
⇒	Different animals require different kinds of feeds depending on their capacity and nature of digestive system thus it is important to ensure this compatibility.	

Extract 4.1: A sample of the candidates' correct responses to Question 6.

Extract 4.1 presents responses from a candidate who demonstrated a good understanding of the subject matter.

Moreover, 52.58 per cent of the candidates attained an average performance. The majority were unable to provide all the factors to be considered when selecting livestock feeds, while others gave incomplete explanations, which resulted in moderate scores. This suggests that the candidates had a partial understanding of the subject matter.

On the other hand, 23.20 per cent of the candidates performed weakly on the question. Most of them failed to state the factors to consider when selecting livestock feeds. Instead, some provided the steps involved in

making hay, such as *cutting the fodder, drying it, collecting it, tying it into bales, and storing the hay in a waterproof store*. Others incorrectly mentioned the types of feeds, such as *succulent feeds, roughages, concentrates, minerals, and supplements*. Moreover, several candidates gave irrelevant or incorrect responses, including *season of the year, activity done by the animal, body conformation, animals shape, and habit and behavior of the animal*. These responses indicate a clear misunderstanding of the factors to be considered when selecting livestock feeds. Extract 4.2 presents responses from a candidate who demonstrated weak performance on this question.

06	selection: is the proper of farm to choose area or place for keeping livestock or to plant crops. To avoiding disease: This because of the people to make well housing wood to the animal so that wood to the people help them to the disease. To avoid conflict: This make to avoid conflict of the people are used to the farm and pastoralism this are used. To ensure security: This because of the people to get security of the people this are used to ensure a curity of the people and this maintain to the people that used to the people and control them. To used them To avoid dangerous animal like Snake: This because of the farm to reduced to the people are used to control to the people and the people are used to the people are used to control and provide to provided and are used to the people. To ensure good health of the animal: This it used to the people to promote to the people and this are used to the people to control and some of the society and provided to people To avoiding water during the rain: This are used to the society and this are used to provide to the society	
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Extract 4.2: A sample of the candidates' incorrect responses to Question 6.

Extract 4.2 portrays the responses from a candidate who lacked knowledge of the subject matter providing incorrect responses to the whole question.

2.1.7 Question 7: Factors of Production

How can a labour force efficiency in sisal farming be increased? Briefly explain by using six points. The question assessed the candidates' understanding of the concept of labour as a factor of production.

The question was attempted by all 9,555 (100%) candidates, of which 4,675 (48.93%) scored between 0.0 and 2.5 marks, 3,547 (37.12%) scored between 3.0 and 5.5 marks, and 1,333 (13.95%) scored between 6.0 and 9.0 marks. Overall, this represents an average performance. Figure 7 illustrates the distribution of candidates' scores for this question.

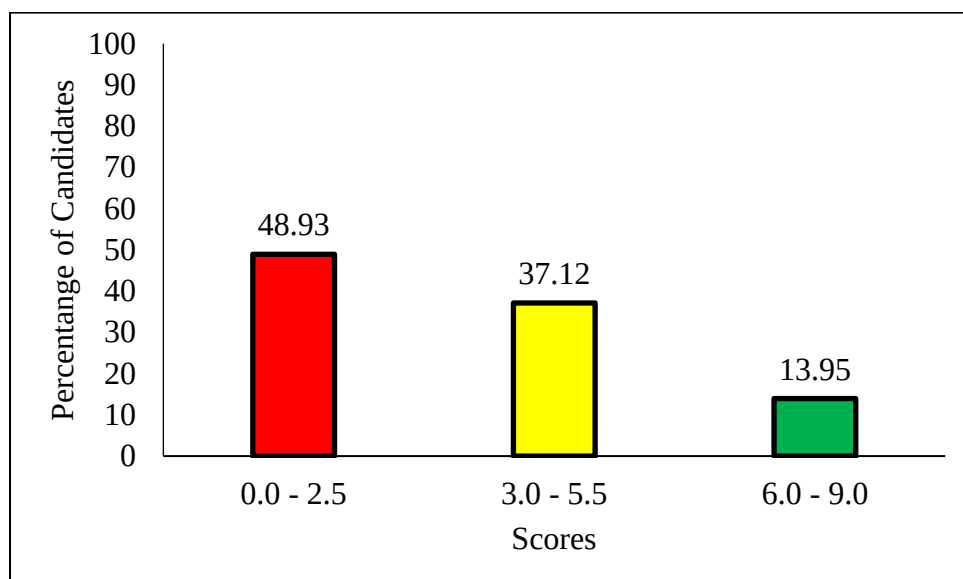


Figure 7: Candidates' Performance on Question 7

Data indicate that 13.95 per cent of the candidates performed well on the question. Most of them responded correctly to the whole question. The candidates successfully explained how to increase labour efficiency in the farm. Their correct responses included *training the labour force*, *farm mechanization*, *motivating the labour force (giving incentives)*, *assigning specific tasks*, *track labour force time*, *communicate effectively*, *keep the farm goals or plans clear and focused*, and *promotion or increasing of wages and salaries*. These responses reflect a solid understanding of the methods of increasing labour efficiency in the farm. Extract 5.1 presents responses from a candidate who performed well on this question.

07	The following are the ways of how labour force efficiency can be increased.	
	i. <u>By training the labour force</u>	
	Once labour are imputed with certain knowledge and skills hence their efficiency in accomplishing farm works and operations will be increased	
	ii. <u>By applying farm mechanization</u>	
	This involves the use of farm machinery example tractor and harvesters. These machineries and tools will tend to increase farm labour efficiency by reducing ~~druggery~~ drudgery and also save time for farm works.	
	iii. <u>By giving labour with rewards</u>	
	This involves gifting the labour, where by this tends to give morale to the labour and hence inspire the labour to perform farm operations effectively	
	iv. <u>Developing effective communication with labour</u> , where by this builds good relationship between the labour and farm manager, hence the farm owner or manager gets benefit of that the labour is doing farm work properly as a result of good relation	

07	ship among them.	
	v. <u>Timely payment of salaries</u>	
	This increases labour efficiency in such a way	
	that labour ~~has~~ is sure of being payed for the	
	work he or she does, moreover payed timely as	
	agreed with the farm owner	
	vi. <u>Assigning labour with specific tasks.</u>	
	When labour are assigned specifically with	
	various tasks, this results to accomplishment of	
	farm works and operations, hence proves their	
	efficiency to be increased.	

Extract 5.1: A sample of the candidates' correct responses to Question 7.

Extract 5.1 presents a sample of correct responses from a candidate who accurately responded to the entire question. This demonstrates a strong understanding of methods of increasing labour efficiency in the farm.

Statistical data indicate that 37.12 per cent of the candidates achieved an average performance. The majority either failed to provide all the required points or did not explain them in sufficient detail. These partially correct responses resulted in average scores, reflecting an incomplete understanding of the concepts.

Nevertheless, 48.93 per cent of the candidates performed weakly on the question. Most of them were unable to explain how labour force efficiency can be increased on the farm. Instead, some listed methods of increasing land value, such as *irrigation of arid land, application of manure, land reclamation, drainage of swamps, construction of terraces, and planting of trees*. Others provided the importance of agriculture as methods of increasing labour efficiency. Such responses included: *it is a source of national income, raw materials for industries, employment opportunities, foreign currency, and it helps to improve the living standards of people*.

Furthermore, some candidates described managerial practices in a sisal farm, such as *controlling weeds through weeding, applying manure, controlling pests and diseases, harvesting mature sisal leaves for processing, and*

transporting processed sisal for further processing. A significant number of candidates also gave entirely incorrect responses by listing labour roles on the farm, such as *ensuring safety and security, cultivation, planting, watering, and harvesting*. These incorrect responses indicate a failure to understand the requirements of the question. Extract 5.2 presents an example of responses from a candidate who performed weakly on this question.

7.	i) It provide employment opportunity for example during harvesting and plantation the labours are applied. ii) It simplify the work. for example when there have high labour force the work can done easily iii) It improve living standard of people due to the employment and capital we get during sisal production the farmer and labour can improve live standard. iv) It is a source of income. for example during production of sisal the labour are used so those labour may get income. v) It is a source of foreign currency. for example the product are sold to the country so the foreign currency which have more valuable the farmer will get vi) It make a good relation between labour and farmer. This is because the labour do the sisal production activity on the farm of farmer so will make good relation to the make easily get other activity to labour.	
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Extract 5.2: A sample of the candidates' incorrect responses to Question 7.

Extract 5.2 illustrates responses from a candidate who provided entirely incorrect responses signifying a lack of subject matter knowledge.

2.1.8 Question 8: Agricultural Marketing

Why the Tanzania agricultural marketing system is not performing to its potential? Explain by giving nine points. The question assessed the candidates' understanding of the concept of agricultural marketing system.

The question was attempted by all 9,555 (100%) candidates, of whom 4,346 (45.48%) scored between 0.0 and 2.5 marks, 4,074 (42.64%) scored between 3.0 and 5.5 marks, and 1,135 (11.88%) scored between 6.0 and 9.0 marks. Overall, the performance on this question was average. Figure 8 illustrates the distribution of candidates' scores for this question.

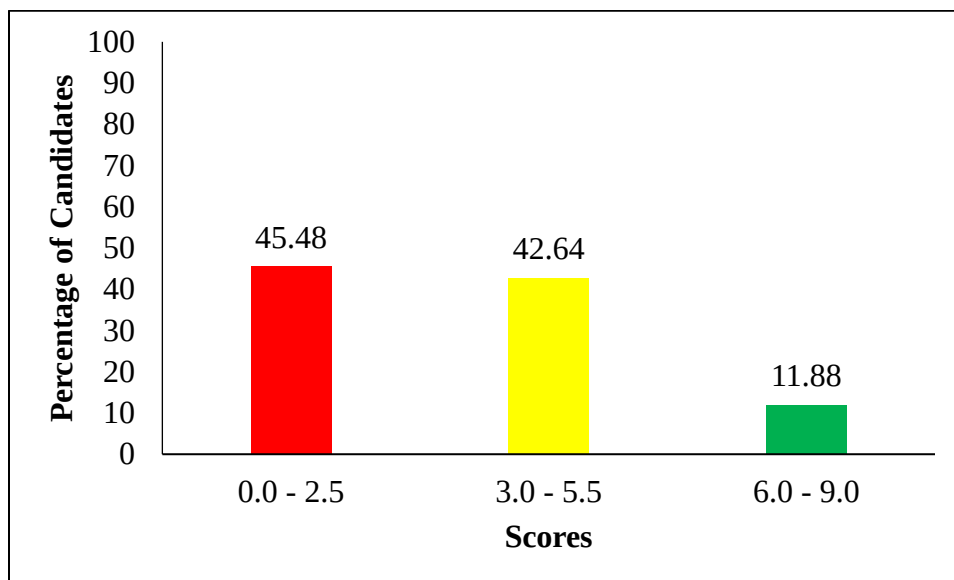


Figure 8: *Candidates' Performance on Question 8*

The candidates who performed well on the question were 11.88 per cent. Most of them were able to give reasons why the agricultural marketing system in Tanzania is not functioning to its potential. The correct responses provided include *lack of constant supply, lack of sophisticated storage facilities, poor infrastructure, length of agricultural commodity value chain, accessing market information, weak enforcement of grading guidelines, inadequate access to finance, high price of farm input, unethical behaviour*. The candidates' responses demonstrated a strong understanding of the challenges facing agricultural marketing system in Tanzania. Extract 6.1 presents a sample of correct responses to the question.

08.	Tanzania agricultural marketing system is not performing to its potential due to the following reasons.	
	(i) Poor access to adequate financial assistance to <u>strengthen capital investment</u> , this causes poor yield and quality of produces.	
	(ii) ~~to~~ Insufficient reliable transport and communication networks especially in rural/remote areas. thus limiting supply of products	
	(iii) Lack of sophisticated (modern and more efficient) storage facilities for agricultural produces thus lowering quality for a time.	
	(iv) Weak laws and policies enforcement guiding the agricultural marketing systems, this causes many errors to occur during marketing processes.	
	(v) Unethical behaviour to some traders or middle men trying to maximize profit while lowering quality	
	(vi) long agricultural marketing value chain whereby many individuals have desire to benefit on the same product thus higher price to the final consumer.	
	(vii) Less knowledge and skills on agricultural marketing among individuals, this reduce efficiency of marketing systems.	
	(viii) Multiple regulations on the same agricultural products thus creating contradictions in marketing system.	
	(ix) Less technological advancement to maximize and maintain quality and yield of various produces.	

Extract 6.1: A sample of the candidates' correct responses to Question 8.

Extract 6.1 indicates responses from a candidate who provided correct challenges that face agricultural marketing system in Tanzania. The candidate demonstrated good understanding of the subject matter.

Additionally, 42.64 per cent of the candidates attained an average performance on the question. The majority were able to identify the challenges facing the agricultural marketing system in Tanzania but failed to provide detailed explanations, indicating a superficial understanding of the concept.

However, 45.48 per cent of the candidates performed weakly. Most of them failed to give reasons why Tanzania's agricultural marketing system is not

performing to its full potential. Instead, some listed marketing functions for agricultural produce, such as *grading, standardisation, processing, packaging, storage and handling, transportation, and distribution*. Others incorrectly mentioned types of agricultural markets, including *monopoly, oligopoly, monopsony, free market, and black market*. A few candidates further deviated from the question by providing irrelevant responses, such as *lack of security in the marketing system, burning of vegetation cover, shortage of raw materials, an inadequate labour force, and lack of foreign currency*. These responses reflect limited competence in the subject matter. Extract 6.2 presents an example of responses from a candidate who performed weakly on this question.

8.	i) Source of foreign exchange. The raw material produce in Tanzania like cotton, cloves, tea and coffee are transporting from outside country that start from foreign exchange between one country to another.
	ii) Source of food; like crops such as paddy, Millet, Maize, beans, sorghum, pea beans, and so on the agriculture performing process is Undertaking for human purpose using as basic need applied.
	iii) Source of employment; A person It employed It self for providing agro-plants purpose for domestic or Commercial purpose that help many men to employed themselves themselves for better development.
	iv) Source of income; the exchange of crops or agriculture produce to wholesalers to jobber upto to other people as government production helps to get income of nation or individual income.
	v) Creation of Implementation; for example a group of people with their knowledge of developing the market process. the agriculture marketing it provide people to creat implementing of their own basic situation.

Extract 6.2: A sample of the candidates' incorrect responses to Question 8.

Extract 6.2 is a sample of responses from a candidate who failed to provide correct challenges that face agricultural marketing system in Tanzania. Instead, the candidate provided the importance of agriculture suggesting a lack of competence in the subject matter.

2.1.9 Question 9: Principles of Crop Production

During a farm visit around the school, Form One students were surprised to observe a high weed infestation in the farm. In six points, explain the reasons for weeds being so successful and dominant in the environment. The question assessed the candidates' understanding of weeds and the biological and ecological characteristics that enable them to thrive.

The question was attempted by 7,480 (78.30%) candidates, of these 3,154 (42.17%) scored between 0.0 and 4.0 marks, 2,679 (35.81%) scored between 4.5 and 9.5 marks, and 1,647 (22.02%) scored between 10.0 and 15.0 marks. This indicates an overall average performance. Figure 9 illustrates the distribution of candidates' scores for this question.

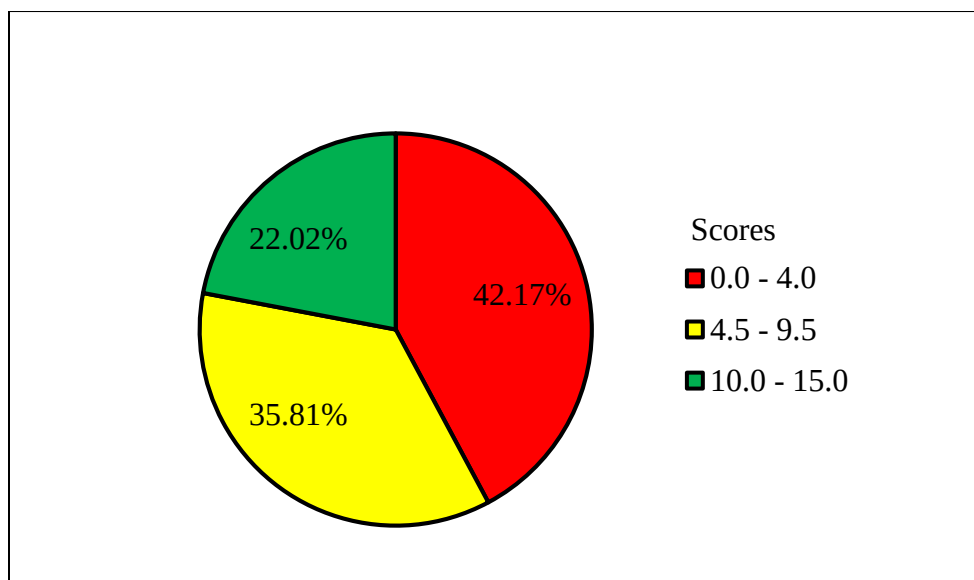


Figure 9: Candidates' Performance on Question 9

The statistics further indicate that 22.02 per cent of the candidates performed well on this question. The majority successfully explained the reasons for the successful establishment and dominance of weeds in the farm. Examples of correct responses included: *production of a large number of viable seeds, effective seed dispersal mechanisms, long seed viability and dormancy, short life cycles, tolerance to harsh environmental conditions, multiple modes of reproduction (sexual and vegetative), and extensive root systems that*

enhance nutrient and water uptake. These responses demonstrated a clear understanding of the biological characteristics that make weeds competitive and persistent. Additionally, good essay-writing skills, including logical organization and clear explanations, contributed to higher scores. Extract 7.1 provides a sample of a candidate's correct responses to the question.

9.	Weeds; Are plants that grow where they are not needed and their economic disadvantages outweigh the advantages. Examples of weeds are couch grass, sodas apple and black night shade. It is true that weeds are so successful and dominant in the environment. The following are the reasons for their success:	
	Weeds have ability to produce large quantity of seeds. Most of weeds produce alot of seeds hence they establish very fast and become many even when other seeds fail to germinate they still succeed to dominate the environments.	
	Weeds have long and extensive roots for effective absorption of water and nutrients from the soil; Unlike field crops weeds have very long roots which have ability to access the deeper nutrients and water from the soil.	
	Weed seeds have ability to remain viable in the soil or water for a long time waiting for suitable germination condition; Field weed seeds are very resistive to unfavourable environment so they are able to wait for suitable germination condition.	
	Weeds have ability to produce both sexually and asexually; weeds are very successful and dominant since they do not only rely on gamete formation (fertilization) for reproduction but also they	

9	can increase in number through asexual reproduction that is through spores	
	Weeds have short life cycle; Most weeds have short life cycle hence they cannot easily get diminished before the end of their life cycle. This makes them successful and dominant in the environment.	
	Weed seeds can be easily dispersed by wind, animal or water; weeds produce very light seeds which are easily dispersed or moved by water through rainfalls, wind and animals during their movements. This causes weeds to be so successful and dominant in the environment.	
	Generally Weeds are Advantageous but also disadvantageous, some weeds serve as a valuable source of food, raw material for composite making and Mulching material likewise weeds on the other hand compete with crop plant for nutrients and water, They irritate farmers during farming and some are parasitic to plants.	

Extract 7.1: A sample of the candidates' correct responses to Question 9.

Extract 7.1 presents responses from a candidate who addressed all parts of the question correctly, demonstrating strong subject mastery and the ability to explain points clearly and comprehensively.

The record further shows that 35.81 per cent of the candidates attained an average performance. Most of them identified some correct reasons but provided insufficient explanations or failed to present the required six points. Others gave brief or generalized statements without linking them clearly to weed dominance. Although many organized their essays into introduction, main body, and conclusion, the lack of detailed elaboration limited their scores. These responses indicate partial understanding of the concept.

In contrast, 42.17 per cent of the candidates performed weakly on the question. The majority were unable to explain the reasons for weeds being successful and dominant in the environment. Some misinterpreted the question and described the beneficial uses of weeds, such as preventing soil erosion, *serving as livestock feed, providing vegetables or medicine*, and *conserving biodiversity*. Others focused on the negative effects of weeds, including *competition with crops, harbouring pests, or increasing production costs*, rather than explaining the biological and ecological traits that contribute to their success.

Additionally, several candidates provided irrelevant responses such as *poor seedbed preparation, improper herbicide application, mono-cropping*, and *poor weeding practices*, which relate to management practices rather than inherent characteristics of weeds. These misconceptions reflect a weak understanding of the concept. Furthermore, despite attempting an essay format, some candidates failed to provide appropriate introductions and conclusions. Extract 7.2 presents examples of incorrect responses.

'9.	Weeds; Is the substance that can be in the farming the weeds infestation in the farm. There have be could be the reason for weeds being so successful and domination in the Environment. The following are the weed that infestation in the farm.	
	It reduce the soil erosion; The weeds can reduce soil erosion because when we can gating the weeds the can cause soil erosion to the farm so the can produce the the erosion to the farm so the weeds to help to reduce soil erosion	
	It can reduce loss of Nutrients; The weeds help to reduce soil erosion to the farming because when the farming have be reducing the nutrients it can because the farming erosion and it cause soil be have not a have high nutrients to produce high production.	

9	It reduce land degradation; The soil when you get the weeds the can cause the land degradation to the farming that should be use to improve soil fertility. It Improve Soil fertility; It should improve soil fertility because the weed should help to reduce soil fertility to the farming that should use in the farm and provide high nutrient that should help to the production. It Increase soil pH; The crease of soil ph to the farming because the soil should not starteed to the weed control to the farming system and can provide good production and good production in agricultural activities. It should be increase the soil depth; The farming system should increase the farming productivities and affectivity to be good quality. Generally the weeds also have so important to the farming management and should be help the farming system and increase of good production.	
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Extract 7.2: A sample of the candidates' incorrect responses to Question 9.

Extract 7.2 shows responses from a candidate who failed to explain the reasons for weed dominance, indicating poor mastery of the subject matter.

2.1.10 Question 10: Contemporary Issues in Agriculture

The knowledge of Genetically Modified Organisms (GMOs) has increased food security in some societies. Describe its advantages and disadvantages by giving three points for each. The question examined the candidates' understanding of the concept of genetic modification and its implications in agriculture.

The question was attempted by 4,721 (49.40%) candidates, whereas 892 (18.89%) scored between 0.0 and 4.0 marks, 2,668 (56.52%) scored between 4.5 and 9.5 marks, and 1,161 (24.59%) scored between 10.0 and 15.0 marks. This indicates an overall good performance on the question. Figure 10 illustrates the distribution of candidates' scores for this question.

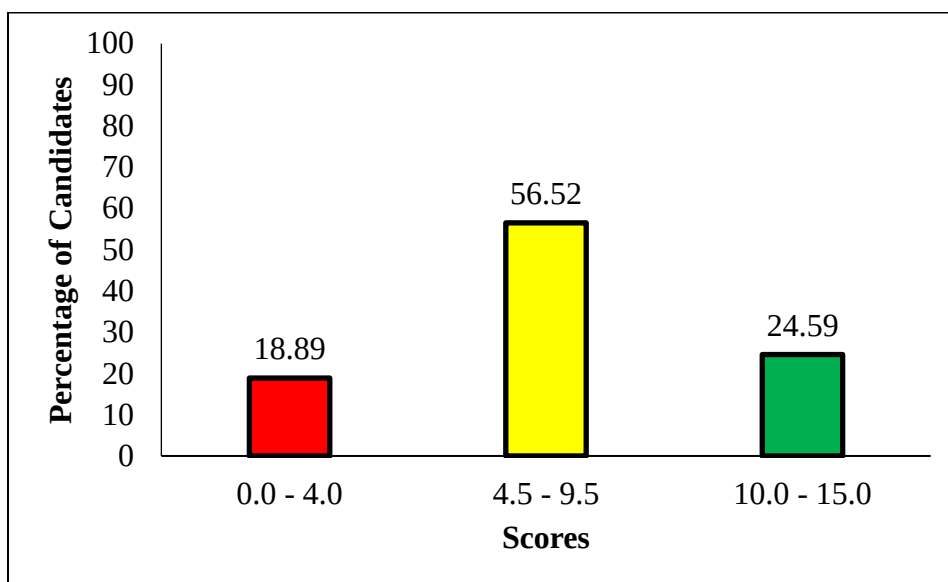


Figure 10: *Candidates' Performance on Question 10*

Data show that 24.59 per cent of the candidates performed well. The majority successfully described both the advantages and disadvantages of genetically modified organisms and provided clear explanations as required. Correct responses included advantages such as *increased yields, improved resistance to pests, diseases and environmental stresses, enhanced nutritional value of products, and reduced production costs*. Disadvantages provided included *possible environmental risks, loss of biodiversity, gene transfer to wild species, harmful effects on non-target organisms, and limited research or regulatory challenges*. These candidates demonstrated good conceptual understanding and were able to organize their essays logically with clear introductions, well-developed main points, and relevant conclusions. Extract 8.1 provides a sample of correct responses to the question.

10.	Genetically modified Organisms; Are the organisms which their genetic material (DNA or RNA) have been modified. the genetically modified organisms their seeds are infected with <i>bacillus</i> which cause the pest resistance. Example are BT-cotton and Drought resistance ^{maize} ~~peas~~ the genetically modified organisms have the advantages and the disadvantages according to their modification done. By starting with the advantage, the following are the advantages of genetically modified Organisms Produce high yield; the genetically modified organisms produce the high yield as the genetically modified organisms such as the Drought resistance maize, the maize ~~seed~~ produced should be used by the people as the maize are not affected by drought and pest thus the maize can grow well. hence the genetically modified organisms have caused the production of high yield Produce crops which are tolerant to harsh condition; the genetically modified organisms they produce the crops which are tolerant to the harsh climatic condition as the tolerance against pest like BT-cotton help in producing without being harmed by the pest also the drought resistant maize the maize which are resistant to drought lead to	
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10 production without effect so the genetically modified organisms produce the crops which are tolerant to harsh conditions, such as climate and pest/disease. ~~And~~ nutritional value; the genetically modified organisms, it leads to the addition of the nutritional value as the basilar add to a crop leads to the production of the quality and quantity crops. So the nutritional value can be added by the genetic modification made. The points mentioned were the advantages of the genetically modified organisms. The following are the disadvantages of genetically modified organisms.

Affect the existence of indigenous species; the genetically modified organisms can affect the existence of the indigenous species as the genetically modified organisms breed with the indigenous species which lead to the crop which it contains both gene from the genetic modified organisms and indigenous species and they are formed which are good than the indigenous species and also lead the existence of indigenous species being affected.

Cause residual effect; the genetically modified organisms can cause the residual effect to the soil as the genetically modified organisms it does not depend on the organic matter substance to have a good production of the crop but also as genetically modified organisms can have the chemicals which may leave effects to the soil. So the genetically modified organisms have the effects to the organism.

	It is expensive; the genetically modified organism they are	
	expensive in the composition of the gene as they require high skills	
	and knowledge but also the system is it is more scientific advances	
	which can not be applied in all countries so the genetically modified	
	organisms are expensive	
	Generally; the genetically modified organisms as mentioned above	
	they have the advantages and disadvantages but the genetically	
	modified organisms are genetically modified organisms have	
	importance such as ensure the availability of food throughout the	
	year as the drought resistant maize which is not affected	
	by the dry season which have easy availability of food throughout.	

Extract 8.1: A sample of the candidates' correct responses to Question 10.

Extract 8.1 presents responses from a candidate who demonstrated strong subject mastery by describing the points clearly and comprehensively while adhering to the required number of advantages and disadvantages.

Data further indicate that 56.52 per cent of the candidates attained an average performance. Most of them identified some correct points but provided brief or incomplete explanations. Others failed to present the required three advantages and three disadvantages or mixed the two categories. In some cases, candidates merely listed points without describing them. Although many attempted to structure their essays properly, the lack of detailed elaboration limited their scores. These responses suggest partial understanding of the concept.

However, 18.89 per cent of the candidates performed weakly on the question. The majority were unable to describe the advantages and disadvantages of genetically modified organisms correctly. Some confused GMOs with unrelated agricultural practices and instead described the benefits of mulching, sustainable agriculture, or general crop management practices. Others provided broad socio-economic statements such as improving the national economy, reducing poverty, or promoting science and technology, which were not specific to GMOs.

Similarly, some candidates misinterpreted the disadvantages and described the general effects of environmental degradation or climate change rather than risks directly associated with genetic modification. A few gave scientifically inaccurate statements, such as *GMOs causing poison in crops or automatically reducing food quality*, without valid explanations. These misconceptions reflect weak subject mastery and failure to understand the requirements of the question. Furthermore, poor essay-writing skills, including lack of organization and incomplete responses, contributed to the low scores. Extract 8.2 presents examples of incorrect responses to the question.

10	Modified organism: Is the process of the crop to production of the organism. The following advantages and disadvantage of the It control soil erosion: This the processing of grouping to amount of substance that the amount of substance.	
	It control of weed: This the processing to amount of the amount of substance when used to amount of the following to amount.	
	It reduce risk: This the processing of crop production that used to amount the following of the when used to modified organism.	
	The following of Disadvantage of the crop production to amount.	
	It Improve the soil erosion.	
	This the amount of substance that the controlled to amount of the following.	
	It Improve soil texture.	
	This the processing of crop production that the following to amount of the amount of substance.	
	It reduce to control pest and disease.	
	This the processing of the amount of the.	
	Generally: It this the processing to amount of the when used to amount of substance, to controlled the amount to amount of the substance to amount.	

Extract 8.2: A sample of the candidates' incorrect responses to Question 10.

Extract 8.2 shows responses from a candidate who provided irrelevant and inaccurate points, indicating inadequate understanding of genetically modified organisms and the demands of the question.

2.1.11 Question 11: Introduction to Soil Science

Using five points, show how soil texture is important in plant growth. The question tested the candidates' understanding of soil texture and its influence on plant growth.

The question was attempted by 6,909 (72.30%) candidates, of which 2,116 (30.63%) scored between 0.0 and 4.0 marks, 4,016 (58.12%) scored between 4.5 and 9.5 marks, and 777 (11.25%) scored between 10.0 and 15.0 marks. Overall, the performance on this question was good. Figure 11 illustrates the distribution of candidates' scores for this question.

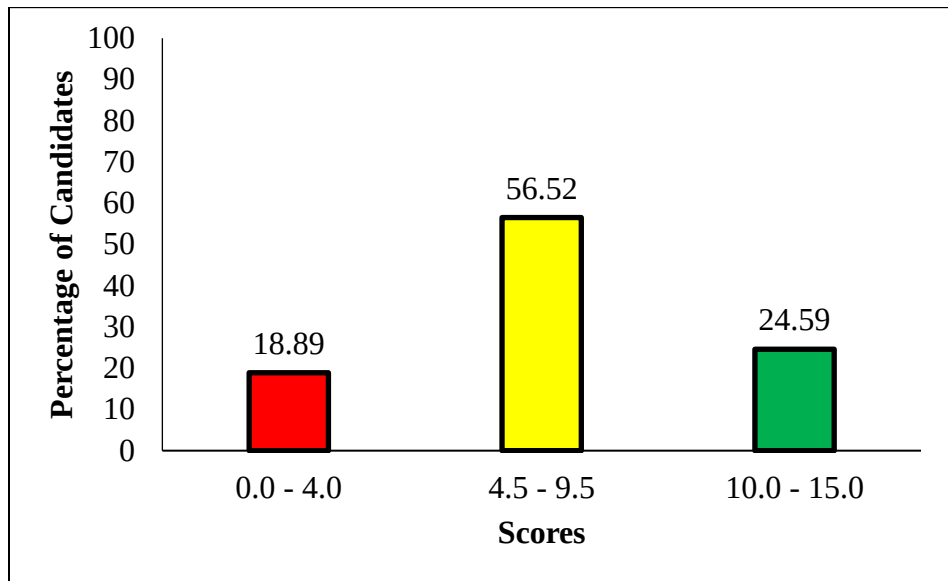


Figure 11: *Candidates' Performance on Question 11*

Statistical analysis indicates that 11.25 per cent of the candidates performed well. Most successfully explained how soil texture is important in plant growth. Their correct responses included explaining that *soil texture influences root penetration, water movement and moisture holding capacity, nutrient retention and soil fertility, aeration, and soil workability*. Some further elaborated that *sandy soils allow better drainage and aeration but retain less water and nutrients, while clay soils hold more water and nutrients but may restrict aeration and root growth*. These responses demonstrate that the candidates had adequate knowledge and skills regarding the importance of soil texture in crop production. Additionally, their clear explanations and proper essay organization into introduction, main body, and conclusion contributed to higher scores. Extract 9.1 provides a sample of correct responses from one of the candidates.

11	Soil texture this characteristic of soil refers to the coarseness or fineness of the soil particles. In fact each soil type has its own texture. Where by clay soil is known of having the smallest particle size, mean while sand soil is the one having largest particle size of about 0.2mm to 2mm. Moreover soil texture has got some of important in plant growth. Therefore the following are some of the importance of soil texture in plant growth (Crop production) It helps to determine the type of crop to be planted in an area, such that crop plants differ where by some grow well and better on fine soil particles like clay soil while others on coarse soil particles like sandy soil and others on medium sized soil particles. It facilitates roots penetration in the soil, on the other hand soil texture determines the roots' penetration ability into the soil in search for water and mineral salts. It determines the water holding capacity of soil. In this soil texture explains that soil having small size hold more water compared to those with large particle size. For example clay soil has high water holding capacity due to its soil particles having smallest sizes. It helps to determine soil aeration, soil texture also helps to know the ability of a particular soil to allow air exchange in the soil (Aeration). Such that soil with large particle size like sandy soil have good aeration compared to soils having
----	---

11	ving fine particle size like clay soils.	
	It helps to determine the ~~type of machinery~~ ~~to be used~~ nutrients available in the soil, simply because soils with coarse particle usually do not have organic matter hence becomes less subjected to soil nutrients. Mean while the ones with medium or fine particle size like silt, loam and clay soils are rich in many plant nutrients.	
	To sum up, soil texture can be detected by various methods. mainly by physical method which involves rubbing soil particles ~~at~~ between the fingertips and chemical method which involves the use of Barium sulphate powder. Thus such methods can be used to determine soil texture.	

Extract 9.1: A sample of the candidates' correct responses to Question 11.

Extract 9.1 presents a sample response from a candidate who provided correct responses to the question, indicating a good understanding of the concept.

Further analysis shows that 58.12 per cent of the candidates achieved average performance. Most were able to identify several points related to the importance of soil texture but provided brief or superficial explanations. Others merely listed points such as *water holding capacity*, *aeration*, or *fertility* without showing how each factor affects plant growth. This partial treatment of the question resulted in moderate scores, reflecting an incomplete understanding of the concept. In some cases, weak essay structure and poor linkage between ideas also limited their marks.

However, 30.63 per cent of the candidates performed weakly on the question. The majority failed to explain the importance of soil texture in plant growth. Instead, some confused soil texture with other soil properties and wrote about the importance of organic matter, soil conservation, or general soil management practices. Others listed the functions of plant nutrients or the importance of fertilizers rather than focusing on soil texture. Such responses did not address the demands of the question.

A few candidates provided completely irrelevant or incorrect responses, such as stating that *soil texture controls pests and diseases, increases organic matter directly, or improves rainfall*. These answers indicate a lack of subject matter knowledge and skills. Furthermore, poor essay-writing skills, including lack of organization, repetition, and unclear explanations, led many candidates to miss marks related to coherence and clarity. Extract 9.2 provides a sample of responses from a candidate who performed weakly on this question.

11	Soil texture : Is the soil to improved the alicality in the organic matter An area where the carcass is lifted off the ground for playing process to be completed in which use the certain harmful in the plant growth in soil ~~for~~ texture is very importance of the plant growth the follow. Soil texture It promote the formation of roots in which used the soil texture It promote the soil formation of the roots in which of the plant growth area where the carcass the is lifted off the ground to the accumulation of organic Soil texture It regulates the up take of potassium by the blanti. They important of the soil texture in which regulates the up take of potassium by the plant in which use to asked to determine the quantity and the rate of accumulation of organic matter in management of water holding capacity of the advise the quantity of the farm's	
----	---	--

11	Silking and tasseling: In which use the moisture it used to silking and tasseling of the requirement of for plant growth in area where the plant in the growth, farmer are advised to have tools for removing excessive branches which allow to use the produce the form the farmers. It soil texture it use the flowering planicle initiation: They contactation of the planning to apply pesticides to kill certain harmful In harmful insects in the father contribution by the determined to the ensure to use if the advised much of the soil texture other soil plant growth. Soil texture root enlargements: In which of the contactation of the root enlargement of the use of the contribution of the root of the plant in the pesticides or in the in the soil texture in which root enlargement nt' of the planting. It should the soil texture are crown root initiation in the soil structure to use the production of the contribution of the or market in which to use of the interjects which of the source of food is the government enter in which to use the or pecuation of for aut supply in the area.
11	They for in which use the soil texture are use the important to control the soil texture is important of the plant growth in are for of the plant growth in which using in the plant of the soil matter.

Extract 9.2: A sample of the candidates' incorrect responses to Question 11.

Extract 9.2 exemplifies the responses of a candidate who lacked subject matter knowledge, as evidenced by the provision of multiple incorrect answers to the question.

2.2 034/2 AGRICULTURE 2

2.2.1 Question 2: Introduction to Soil Science

You are provided with: 150 g of specimen **J** (sandy soil), 150 g of specimen **K** (loam soil), 150 g of specimen **L** (clay soil), three filter papers, three filter funnels, three measuring cylinders (250 cm³), one beaker (250 cm³), a source of water, and a wall clock. Perform the following procedures and answer the questions that follow.

Procedures

- (i) Place filter papers in the three filter funnels labelled **J**, **K**, and **L**.
- (ii) Put 150 g of specimen **J** into funnel **J**, 150 g of specimen **K** into funnel **K**, and 150 g of specimen **L** into funnel **L**. Place each funnel in a separate 250 cm³ measuring cylinder.
- (iii) Measure 100 cm³ of water using the beaker.
- (iv) Pour the water into filter funnel **J**.
- (v) After five minutes, remove the funnel and record the volume of water collected in the measuring cylinder.
- (vi) Repeat steps (iii), (iv), and (v) for specimens **K** and **L**.

Questions

- (a) Giving two reasons in each case, comment on the suitability of specimens **J**, **K**, and **L** for crop production.
- (b) Based on your observations in the experiment, suggest the possible textural class for each of the specimens **J**, **K**, and **L**.
- (c) Apart from the soil characteristics observed during the experiment, state two other good characteristics of each specimen that make it suitable for crop production.
- (d) Explain how you would improve one of the specimens identified in part (a) to make it more suitable for crop production. Give eight points.
- (e) Give one reason for the slowest drainage observed in one of the specimens during the experiment.

The question tested candidates' understanding of soil physical properties.

The question was attempted by 9,535 (100%) candidates, of which 1,063 (11.15%) scored between 0.0 and 7.0 marks, 6,214 (65.17%) scored between 7.5 and 16.0 marks, and 2,258 (23.68%) scored between 16.5 and 24.0 marks. Generally, performance on the question was good. Figure 12 illustrates the distribution of candidates' scores for this question.

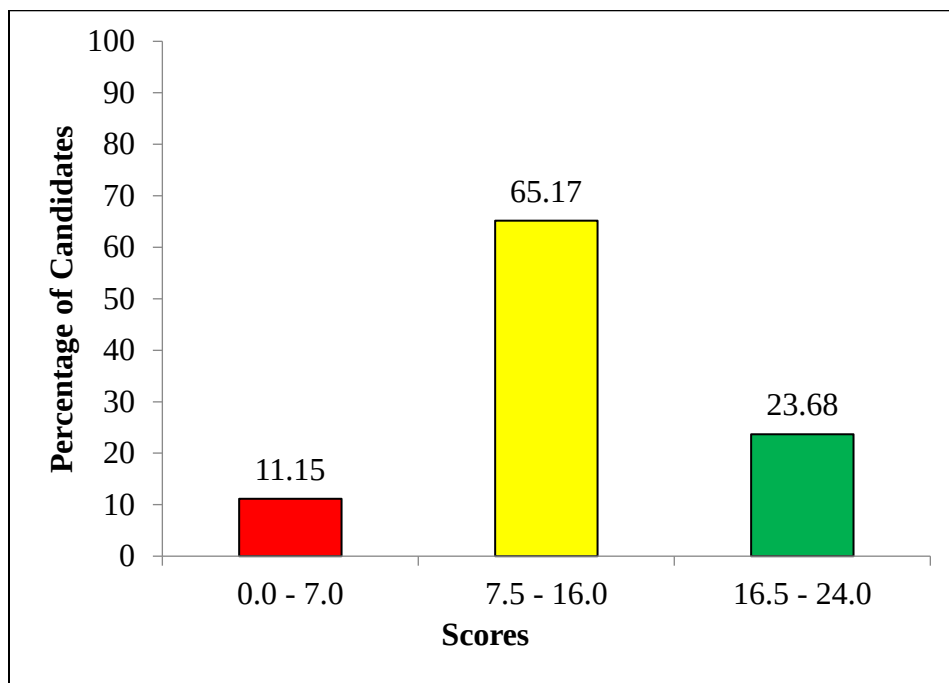


Figure 12: *Candidates' Performance on Question 2*

The statistics reveal that 23.68 per cent of the candidates performed well on the question. Most of them attempted nearly all parts of the question correctly. In part (a), candidates responded as follows: Specimen **J** (Sandy soil) is less suitable for crop production because it has low water-holding capacity and allows rapid drainage. Specimen **K** (Loam soil) is suitable for crop production because it has moderate water-holding capacity and moderate drainage. Specimen **L** (Clay soil) is moderately suitable because it retains too much water and has poor drainage.

In part (b), candidates correctly suggested the textural classes as: specimen **J** – Sandy soil, specimen **K** – Loam soil, and specimen **L** – Clay soil. In part (c), candidates identified additional suitable characteristics as follows: Sandy soil (Specimen **J**): light and easy to cultivate; has large pores that

allow good aeration and is suitable for root crops. Loam soil (Specimen **K**): has a balanced mixture of sand, silt, and clay, which supports good root growth, proper water movement, and nutrient retention; easy to cultivate under different moisture conditions. Clay soil (Specimen **L**): high nutrient-holding capacity; high cation exchange capacity (CEC), which enables it to retain and supply essential nutrients and buffer soil pH.

Likewise, in part (d), the candidates suggested ways of improving sandy soil, including: adding compost or well-decomposed manure to increase organic matter, improving soil structure and nutrient retention, applying mulch to conserve moisture and prevent erosion, planting cover crops, especially legumes, to add nitrogen and organic matter, reducing wind erosion, and using green manure. In part (e), candidates explained that the slow drainage was due to the presence of many small, closely packed particles, which create small pores that restrict water movement.

Overall, responses demonstrated adequate knowledge of soil properties, particularly soil texture, water infiltration and drainage, and their ability to relate these characteristics to soil suitability for crop production. Extract 10.1 shows a sample of correct responses to the question.

2.

(a) specimen J. is less suitable for crop production. because

(i) Have high infiltration rate

(ii) Have low water holding capacity

specimen K is moderate suitable in crop production. because

(i) have moderate water holding capacity

(ii) have moderate infiltration rate

specimen L has is most suitable for crop production because

(i) have higher water holding capacity

(ii) low infiltration rate

(b) specimen J $\rightarrow$ is a sand soil

specimen K $\rightarrow$ is a loam soil

specimen L $\rightarrow$ is a clay soil

2

(C). characteristic of specimen J.

(i) low amount of nutrient

(ii) good drainage

(iii) has good aeration

characteristic of specimen K

(i) It has a medium amount of nutrient

(ii) medium soil aeration

(iii) medium drainage

characteristic of specimen L.

(i) It contains higher nutrient

(ii) poor drainage.

(iii) easy water logged.

2.		
(A)		
(i)	Mulching; This is the process of covering the soil by using dry grass. This help to keep soil moisture	
(ii)	Addition of organic matter; This help to improve nutrient level in the soil by adding organic matter	
(iii)	Addition of Fertiliser; example ammonium sulphate help to increase amount of pH of soil.	
(iv)	Crop rotation; This help to increase soil fertility by rotating the farming crops.	
(v)	Mixed cropping; This help to increase soil fertility by using more than one crop.	
(vi)	Addition of manure; example compost manure help to increase soil fertility by adding manure to the farm.	

2	(ii) liming; include NaOH and MgSO_4 .	
	(iii) by irrigation method; This help to increase amount of water in the soil to improve crop production.	
	(iv) Terracing and contour farming; This help to maintain water level in the soil by using Terrace.	
2	(v) Because specimen 1 has high water holding capacity. so it contain higher amount of water so its poor drainage.	

Extract 10.1: A sample of the candidates' correct responses to Question 2.

Extract 10.1 presents a sample of correct responses from a candidate who attempted all parts of the question clearly and accurately, demonstrating competence and a good understanding of the relevant concept.

Moreover, 65.17 per cent of the candidates demonstrated average performance. These candidates answered some parts correctly, particularly identifying soil texture and general suitability in part (a) and (b). However, many provided incomplete explanations, gave fewer points than required, or confused characteristics of sandy and clay soils in part (c). In part (d),

several listed general farming practices instead of specific soil improvement measures. In part (e), most of them gave the correct reason for slow drainage. This suggests partial understanding of soil physical properties and their management.

In contrast, 11.15 per cent of the candidates performed weakly. Most of them failed to interpret the experiment correctly and showed limited understanding of soil texture and drainage. Some were unable to classify the soils accurately or relate observations to suitability for crop production. Others provided vague or irrelevant answers and omitted several parts of the question. The weak performance was mainly attributed to inadequate practical skills and insufficient knowledge of soil physical properties. Extract 10.2 shows a sample of incorrect responses to the question.

2	a) i) Because it is good aeration.	
	a) It high infiltration rate.	
	(b) Determination of soil texture.	
	Specimen L	
	① poor drainage	
	i) It is high infiltration rate.	
	Specimen K	
	i) It is form ball	
	ii) It is craky.	

	Specimen J	
	i) poor drainage.	
	ii) Good aeration.	
	iii) It is poor drainage.	
	iv) It is low water holding Capacity.	
	v) It has low infiltration rate	
	vi) poor aeration	
	vii) low compaction	
	viii) High difficult	
	© Specimen L it has less amount of	
	Water in the Measuring cylinder	

Extract 10.2: A sample of the candidates' incorrect responses to Question 2.

Extract 10.2 presents responses from a candidate who answered all parts of the question incorrectly. The candidate demonstrated a lack of knowledge and practical skills related to soil texture.

3.0 THE ANALYSIS OF THE CANDIDATES' PERFORMANCE ON EACH TOPIC

This section presents an analysis of candidates' performance in each topic. Fourteen (14) topics were assessed in the year 2025 examination, namely: *Mechanisation in Agriculture, Agricultural Development in Tanzania, Agricultural Marketing, Principles of Crop Production, Introduction to Livestock Production, Crop Husbandry, Introduction to Crop Production, Principles of Livestock Production, Introduction to Soil Science,*

Introduction to Agriculture, Soil Productivity, Fundamentals of Farm Management, Contemporary Issues in Agriculture, and Factors of Production.

The topics of *Agricultural Development in Tanzania, Introduction to Crop Production, Introduction to Soil Science, Introduction to Agriculture, Mechanisation in Agriculture, Soil Productivity, Introduction to Livestock Production, Crop Husbandry, Fundamentals of Farm Management, and Principles of Crop Production*, which were assessed through multiple-choice questions, recorded good performance, with an average pass rate of 81.61 per cent. Other topics that also demonstrated good performance were *Contemporary Issues in Agriculture* (81.11%), *Introduction to Soil Science* (79.11%), and *Principles of Livestock Production* (78.68%).

Furthermore, average performance was observed in *Crop Husbandry* (59.74%), *Soil Productivity* (56.98%), *Principles of Crop Production* (56.92%), *Agricultural Marketing* (54.52%), and *Factors of Production* (51.07%). This average performance was mainly attributed to candidates' inadequate understanding of key concepts in these topics, which led to their failure to fully meet the requirements of the questions. The performance of the candidates in each topic is summarised in the Appendix.

4.0 CONCLUSION AND RECOMMENDATIONS

This section presents a brief review of how candidates responded to the examination questions and includes recommendations for enhancing performance based on the observed outcomes.

4.1 Conclusion

The analysis of the 2025 Certificate of Secondary Education Examination in Agriculture reveals that the overall performance of candidates was generally good, with the majority achieving grades A to C. Out of 9,555 candidates who sat for the examination, 94.81 per cent passed, indicating a consistently high pass rate comparable to the previous year 2024 which was 95.01 per cent. Despite a slight decline of 0.20 per cent, the overall trend demonstrates stability in candidates' achievement in Agriculture over the two years.

A detailed question-by-question analysis indicates that candidates performed well in areas that required fundamental knowledge and understanding of basic concepts, particularly in topics such as *Mechanisation in Agriculture*,

Agricultural Development, Contemporary Issues in Agriculture, Introduction to Soil Science, and Principles of Livestock Production. Performance was also strong in practical exercises assessing soil characteristics suggesting that candidates generally possess adequate practical skills and conceptual understanding in core areas.

Conversely, average performance was observed in topics requiring higher-order thinking, applied knowledge, or integration of theory with practice, including *Crop Husbandry, Soil Productivity, Principles of Crop Production, Agricultural Marketing, and Factors of Production.* Weaknesses in these areas were largely attributed to inadequate understanding of key concepts, misinterpretation of questions, and limited application of practical knowledge. For instance, many candidates struggled to accurately explain methods for maintaining soil organic matter, the factors influencing labour efficiency, or challenges in the agricultural marketing system.

The data suggest that candidates are generally competent in recalling factual knowledge but face challenges in analytical, evaluative, and practical application skills. Additionally, performance variation across topics underscores the need for more learner-centred and experiential teaching approaches, such as group fieldwork, field experiments, real-life case analysis, and interactive discussion techniques. These methods are likely to enhance understanding, critical thinking, and the ability to apply concepts in practical contexts.

Generally, the 2025 Agriculture CSEE shows that candidates possessed a good understanding of core agricultural knowledge and practical skills. However, areas of average performance indicate the need for targeted pedagogical interventions. A sustained focus on practical exercises, analytical reasoning, and contextual understanding will be essential to improve achievement in topics with average performance and to ensure the long-term enhancement of agricultural education outcomes.

4.2 Recommendations

To improve performance in future examinations in topics that previously recorded average achievement, a range of learner-centred teaching and learning strategies is recommended. These strategies include the following:

(a) Group fieldwork activities

Students should be divided into groups, with each group establishing and maintaining its own nursery bed. This approach promotes collaboration, enhances individual responsibility, and enables learners to acquire knowledge through direct practical experience. The strategy is particularly effective in enhancing students' understanding of seedling management in tomato nurseries under *Crop Husbandry*.

(b) Field experiments

Students should establish two plots: one treated with farmyard manure and the other without manure, and then compare plant growth between the two plots. This method develops learners' analytical skills and promotes long-term understanding of the positive effects of manure on plant growth under *Soil Productivity*.

(c) Analysis of real-life cases

Students should analyse a farm or a farmer who has incurred losses due to crop diseases. This approach enables learners to link theory with real-life situations and fosters critical thinking, thereby enhancing understanding of the effects of crop diseases on production under *Principles of Crop Production*.

(d) Group discussions

Students should discuss various challenges facing the agricultural marketing system, such as poor infrastructure, low prices, exploitation by middlemen, and lack of reliable markets. This strategy encourages the generation of diverse ideas and promotes shared understanding of marketing challenges under *Agricultural Marketing*.

(e) Question-and-answer technique

The teacher should pose questions to students, allow them to respond, and then clarify the correct answers, particularly on ways of improving labour efficiency on the farm. This method stimulates thinking and enhances retention of knowledge under *Factors of Production*.

Appendix

Candidates Performance in Various Topics in 034 Agriculture in CSEE 2025

S/N	Topic	Question Number	Percentage of Candidates who scored an average of 30% or Above	Comments
1.	<i>Agricultural Development in Tanzania, Introduction to Crop Production, Introduction to Soil Science, Introduction to Agriculture, Mechanization in Agriculture, Soil Productivity, Introduction to Livestock Production, Crop Husbandry, Fundamentals of Farm Management, and Principles of Crop Production.</i>	1	81.61	Good
2.	<i>Contemporary Issues in Agriculture</i>	10	81.11	Good
3.	<i>Introduction to Soil Science</i>	11 and 2 (P2)	79.11	Good
4.	<i>Principles of Livestock Production</i>	2 and 6	78.68	Good
5.	<i>Crop Husbandry</i>	3	59.74	Average
6.	<i>Soil Productivity</i>	4	56.98	Average
7.	<i>Principles of Crop Production</i>	5 and 9	56.92	Average
8.	<i>Agricultural Marketing</i>	8	54.52	Average
9.	<i>Factors of Production</i>	7	51.07	Average

